

2011 SUMMER CANDIDACY PROGRAM MATERIALS
THE CHICAGO-KENT LAW REVIEW

QUESTION

The U.S. Supreme Court held in *Melendez-Diaz* that laboratory reports prepared by forensic analysts for use in criminal proceedings are testimonial statements under the Sixth Amendment's Confrontation Clause, requiring that a defendant be allowed an opportunity for cross-examination. But state and federal courts have split widely over what this means in practice.

Does calling a supervisor or coworker of the original analyst to testify satisfy the confrontation requirement to admit the original analyst's lab report directly into evidence? What about expert testimony, where the original analyst's report is not admitted into evidence, but an expert relies on the report to come to independent conclusions; does this violate the Confrontation Clause?

Using only the sources contained in this packet, write an academic article (15 pages, maximum) discussing these issues and take a stand as to what courts should do in this messy area of the law. Outside research is strictly forbidden. You can analyze the statements or propositions from other sources discussed in the SCP materials. However, you cannot obtain and read those sources; neither should you cite them directly. Keep in mind that not every word of every source relates to the issue. You must determine what is relevant.

Although many of the jurisdictions referenced in the sources below follow their own rules of evidence, assume for this exercise that all rules of evidence are substantially similar to the Federal Rules of Evidence.

Read and follow the 2011 Summer Candidacy Program Instructions, available on the CHICAGO-KENT LAW REVIEW website (www.cklawreview.com).

GOOD LUCK!

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Constitution of the United States

Amendment VI. Jury Trial for Crimes, and Procedural Rights

In all criminal prosecutions, the accused shall enjoy the right to a speedy and public trial, by an impartial jury of the State and district wherein the crime shall have been committed, which district shall have been previously ascertained by law, and to be informed of the nature and cause of the accusation; to be confronted with the witnesses against him; to have compulsory process for obtaining witnesses in his favor, and to have the Assistance of Counsel for his defence.

Federal Rules of Evidence Rule 702

Rule 702. Testimony by Experts

If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.

Rule 703. Bases of Opinion Testimony by Experts

The facts or data in the particular case upon which an expert bases an opinion or inference may be those perceived by or made known to the expert at or before the hearing. If of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject, the facts or data need not be admissible in evidence in order for the opinion or inference to be admitted. Facts or data that are otherwise inadmissible shall not be disclosed to the jury by the proponent of the opinion or inference unless the court determines that their probative value in assisting the jury to evaluate the expert's opinion substantially outweighs their prejudicial effect.

Supreme Court of the United States
Michael D. CRAWFORD, Petitioner,

v.
WASHINGTON.

No. 02-9410.
Argued Nov. 10, 2003.
Decided March 8, 2004.

Justice SCALIA delivered the opinion of the Court.

*38 Petitioner Michael Crawford stabbed a man who allegedly tried to rape his wife, Sylvia. At his trial, the State played for **1357 the jury Sylvia's tape-recorded statement to the police describing the stabbing, even though he had no opportunity for cross-examination. The Washington Supreme Court upheld petitioner's conviction after determining that Sylvia's statement was reliable. The question presented is whether this procedure complied with the Sixth Amendment's guarantee that, "[i]n all criminal prosecutions, the accused shall enjoy the right ... to be confronted with the witnesses against him."

I

On August 5, 1999, Kenneth Lee was stabbed at his apartment. Police arrested petitioner later that night. After giving petitioner and his wife *Miranda* warnings, detectives interrogated each of them twice. Petitioner eventually confessed that he and Sylvia had gone in search of Lee because he was upset over an earlier incident in which Lee had tried to rape her. The two had found Lee at his apartment, and a fight ensued in which Lee was stabbed in the torso and petitioner's hand was cut.

Petitioner gave the following account of the fight:

"Q. Okay. Did you ever see anything in [Lee's] hands?

"A. I think so, but I'm not positive.

"Q. Okay, when you think so, what do you mean by that?

"A. I could a swore I seen him goin' for somethin' before, right before everything happened. He was like *39 reachin', fiddlin' around down here and stuff ... and I just ... I don't know, I think, this is just a possibility, but I think, I think that he pulled somethin' out and I grabbed for it and that's how I got cut ... but I'm not positive. I, I, my mind goes blank when things like this happen. I mean, I just, I remember things wrong, I remember things that just doesn't, don't make sense to me later." App. 155 (punctuation added).

Sylvia generally corroborated petitioner's story about the events leading up to the fight, but her account of the fight itself was arguably different-particularly with respect to whether Lee had drawn a weapon before petitioner assaulted him:

"Q. Did Kenny do anything to fight back from this assault?

"A. (pausing) I know he reached into his pocket ... or somethin' ... I don't know what.

"Q. After he was stabbed?

"A. He saw Michael coming up. He lifted his hand ... his chest open, he might [have] went to go strike his hand out or something and then (inaudible).

"Q. Okay, you, you gotta speak up.

“A. Okay, he lifted his hand over his head maybe to strike Michael's hand down or something and then he put his hands in his ... put his right hand in his right pocket ... took a step back ... Michael proceeded to stab him ... then his hands were like ... how do you explain this ... open arms ... with his hands open and he fell down ... and we ran (describing subject holding hands open, palms toward assailant).

“Q. Okay, when he's standing there with his open hands, you're talking about Kenny, correct?

“A. Yeah, after, after the fact, yes.

“Q. Did you see anything in his hands at that point?

*40 “A. (pausing) um um (no).” *Id.*, at 137 (punctuation added).

The State charged petitioner with assault and attempted murder. At trial, he claimed self-defense. Sylvia did not testify because of the state marital privilege, which generally bars a spouse from testifying without the other spouse's consent. See Wash. Rev.Code § 5.60.060(1) (1994). **1358 In Washington, this privilege does not extend to a spouse's out-of-court statements admissible under a hearsay exception, see *State v. Burden*, 120 Wash.2d 371, 377, 841 P.2d 758, 761 (1992), so the State sought to introduce Sylvia's tape-recorded statements to the police as evidence that the stabbing was not in self-defense. Noting that Sylvia had admitted she led petitioner to Lee's apartment and thus had facilitated the assault, the State invoked the hearsay exception for statements against penal interest, Wash. Rule Evid. 804(b)(3) (2003).

Petitioner countered that, state law notwithstanding, admitting the evidence would violate his federal constitutional right to be “confronted with the witnesses against him.” Amdt. 6. According to our description of that right in *Ohio v. Roberts*, 448 U.S. 56, 100 S.Ct. 2531, 65 L.Ed.2d 597 (1980), it does not bar admission of an unavailable witness's statement against a criminal defendant if the statement bears “adequate ‘indicia of reliability.’” *Id.*, at 66, 100 S.Ct. 2531. To meet that test, evidence must either fall within a “firmly rooted hearsay exception” or bear “particularized guarantees of trustworthiness.” *Ibid.* The trial court here admitted the statement on the latter ground, offering several reasons why it was trustworthy: Sylvia was not shifting blame but rather corroborating her husband's story that he acted in self-defense or “justified reprisal”; she had direct knowledge as an eyewitness; she was describing recent events; and she was being questioned by a “neutral” law enforcement officer. App. 76-77. The prosecution played the tape for the jury and relied on it in closing, arguing that it was “damning evidence” that “completely *41 refutes [petitioner's] claim of self-defense.” Tr. 468 (Oct. 21, 1999). The jury convicted petitioner of assault.

The Washington Court of Appeals reversed. It applied a nine-factor test to determine whether Sylvia's statement bore particularized guarantees of trustworthiness, and noted several reasons why it did not: The statement contradicted one she had previously given; it was made in response to specific questions; and at one point she admitted she had shut her eyes during the stabbing. The court considered and rejected the State's argument that Sylvia's statement was reliable because it coincided with petitioner's to such a degree that the two “interlocked.” The court determined that, although the two statements agreed about the events leading up to the stabbing, they differed on the issue crucial to petitioner's self-defense claim: “[Petitioner's] version asserts that Lee may have had something in his hand when he stabbed him; but Sylvia's version has Lee grabbing for something only after he has been stabbed.” App. 32.

The Washington Supreme Court reinstated the conviction, unanimously concluding that, although Sylvia's statement did not fall under a firmly rooted hearsay exception, it bore guarantees of trustworthiness: “‘[W]hen a codefendant's confession is virtually identical [to, *i.e.*, interlocks with,] that of a defendant, it may be deemed reliable.’” 147 Wash.2d 424, 437, 54 P.3d 656, 663 (2002) (quoting *State v. Rice*, 120 Wash.2d 549, 570, 844 P.2d 416, 427 (1993)). The court explained:

“Although the Court of Appeals concluded that the statements were contradictory, upon closer inspection they appear to overlap....

“[B]oth of the Crawfords' statements indicate that Lee was possibly grabbing for a weapon, but they are equally unsure when this event may have taken place. They are also equally unsure how Michael received the cut on his hand, leading the court to question when, if ever, Lee possessed a weapon. In this respect they overlap....

****1359 *42** “[N]either Michael nor Sylvia clearly stated that Lee had a weapon in hand from which Michael was simply defending himself. And it is this omission by both that interlocks the statements and makes Sylvia's statement reliable.” 147 Wash.2d, at 438-439, 54 P.3d, at 664 (internal quotation marks omitted).^{FN1}

FN1. The court rejected the State's argument that guarantees of trustworthiness were unnecessary since petitioner waived his confrontation rights by invoking the marital privilege. It reasoned that “forcing the defendant to choose between the marital privilege and confronting his spouse presents an untenable Hobson's choice.” 147 Wash.2d, at 432, 54 P.3d, at 660. The State has not challenged this holding here. The State also has not challenged the Court of Appeals' conclusion (not reached by the State Supreme Court) that the confrontation violation, if it occurred, was not harmless. We express no opinion on these matters.

We granted certiorari to determine whether the State's use of Sylvia's statement violated the Confrontation Clause. 539 U.S. 914, 123 S.Ct. 2275, 156 L.Ed.2d 129 (2003).

II

The Sixth Amendment's Confrontation Clause provides that, “[i]n all criminal prosecutions, the accused shall enjoy the right ... to be confronted with the witnesses against him.” We have held that this bedrock procedural guarantee applies to both federal and state prosecutions. *Pointer v. Texas*, 380 U.S. 400, 406, 85 S.Ct. 1065, 13 L.Ed.2d 923 (1965). As noted above, *Roberts* says that an unavailable witness's out-of-court statement may be admitted so long as it has adequate indicia of reliability-*i.e.*, falls within a “firmly rooted hearsay exception” or bears “particularized guarantees of trustworthiness.” 448 U.S., at 66, 100 S.Ct. 2531. Petitioner argues that this test strays from the original meaning of the Confrontation Clause and urges us to reconsider it.

A

The Constitution's text does not alone resolve this case. One could plausibly read “witnesses against” a defendant to ***43** mean those who actually testify at trial, cf. *Woodsides v. State*, 3 Miss. 655, 664-665 (1837), those whose statements are offered at trial, see 3 J. Wigmore, *Evidence* § 1397, p. 104 (2d ed.1923) (hereinafter *Wigmore*), or something in-between, see *infra*, at 1364. We must therefore turn to the historical background of the Clause to understand its meaning.

The right to confront one's accusers is a concept that dates back to Roman times. See *Coy v. Iowa*, 487 U.S. 1012, 1015, 108 S.Ct. 2798, 101 L.Ed.2d 857 (1988); Herrmann & Speer, *Facing the Accuser: Ancient and Medieval Precursors of the Confrontation Clause*, 34 Va. J. Int'l L. 481 (1994). The founding generation's immediate source of the concept, however, was the common law. English common law has long differed from continental civil law in regard to the manner in which witnesses give testimony in criminal trials. The common-law tradition is one of live testimony in court subject to adversarial testing, while the civil law condones examination in private by judicial officers. See 3 W. Blackstone, *Commentaries on the Laws of England* 373-374 (1768).

Nonetheless, England at times adopted elements of the civil-law practice. Justices of the peace or other officials examined suspects and witnesses before trial. These examinations were sometimes read in court in lieu of live testimony, a practice that “occasioned frequent demands by the prisoner to have his ‘accusers,’ *i.e.* the witnesses against him, brought before him face to face.” 1 J. Stephen, *History of the **1360 Criminal Law of England* 326 (1883). In some cases, these demands were refused. See 9 W. Holdsworth, *History of English Law* 216-217, 228 (3d ed.1944); *e.g.*, *Raleigh's Case*, 2 How. St. Tr. 1, 15-16, 24 (1603); *Throckmorton's Case*, 1 How. St. Tr. 869, 875-876 (1554); cf. *Lilburn's Case*, 3 How. St. Tr. 1315, 1318-1322, 1329 (Star Chamber 1637).

Pretrial examinations became routine under two statutes passed during the reign of Queen Mary in the 16th century, 1 & 2 Phil. & M., c. 13 (1554), and 2 & 3 *id.*, c. 10 (1555). ***44** These Marian bail and committal statutes

required justices of the peace to examine suspects and witnesses in felony cases and to certify the results to the court. It is doubtful that the original purpose of the examinations was to produce evidence admissible at trial. See J. Langbein, *Prosecuting Crime in the Renaissance* 21-34 (1974). Whatever the original purpose, however, they came to be used as evidence in some cases, see 2 M. Hale, *Pleas of the Crown* 284 (1736), resulting in an adoption of continental procedure. See 4 Holdsworth, *supra*, at 528-530.

The most notorious instances of civil-law examination occurred in the great political trials of the 16th and 17th centuries. One such was the 1603 trial of Sir Walter Raleigh for treason. Lord Cobham, Raleigh's alleged accomplice, had implicated him in an examination before the Privy Council and in a letter. At Raleigh's trial, these were read to the jury. Raleigh argued that Cobham had lied to save himself: "Cobham is absolutely in the King's mercy; to excuse me cannot avail him; by accusing me he may hope for favour." 1 D. Jardine, *Criminal Trials* 435 (1832). Suspecting that Cobham would recant, Raleigh demanded that the judges call him to appear, arguing that "[t]he Proof of the Common Law is by witness and jury: let Cobham be here, let him speak it. Call my accuser before my face" 2 How. St. Tr., at 15-16. The judges refused, *id.*, at 24, and, despite Raleigh's protestations that he was being tried "by the Spanish Inquisition," *id.*, at 15, the jury convicted, and Raleigh was sentenced to death.

One of Raleigh's trial judges later lamented that " 'the justice of England has never been so degraded and injured as by the condemnation of Sir Walter Raleigh.' " 1 Jardine, *supra*, at 520. Through a series of statutory and judicial reforms, English law developed a right of confrontation that limited these abuses. For example, treason statutes required witnesses to confront the accused "face to face" at his arraignment. *E.g.*, 13 Car. 2, c. 1, § 5 (1661); see 1 Hale, *45 *supra*, at 306. Courts, meanwhile, developed relatively strict rules of unavailability, admitting examinations only if the witness was demonstrably unable to testify in person. See *Lord Morley's Case*, 6 How. St. Tr. 769, 770-771 (H.L.1666); 2 Hale, *supra*, at 284; 1 Stephen, *supra*, at 358. Several authorities also stated that a suspect's confession could be admitted only against himself, and not against others he implicated. See 2 W. Hawkins, *Pleas of the Crown*, ch. 46, § 3, pp. 603-604 (T. Leach 6th ed. 1787); 1 Hale, *supra*, at 585, n. (k); 1 G. Gilbert, *Evidence* 216 (C. Lofft ed. 1791); cf. *Tong's Case*, Kel. J. 17, 18, 84 Eng. Rep. 1061, 1062 (1662) (treason). But see *King v. Westbeer*, 1 Leach 12, 168 Eng. Rep. 108, 109 (1739).

One recurring question was whether the admissibility of an unavailable witness's pretrial examination depended on whether the defendant had had an opportunity to cross-examine him. In 1696, the Court of King's Bench answered this question in the affirmative, in the widely reported misdemeanor libel case of *King v. Paine*, 5 Mod. 163, 87 Eng. Rep. 584. The court ruled that, even though a witness was dead, his examination was not admissible **1361 where "the defendant not being present when [it was] taken before the mayor ... had lost the benefit of a cross-examination." *Id.*, at 165, 87 Eng. Rep., at 585. The question was also debated at length during the infamous proceedings against Sir John Fenwick on a bill of attainder. Fenwick's counsel objected to admitting the examination of a witness who had been spirited away, on the ground that Fenwick had had no opportunity to cross-examine. See *Fenwick's Case*, 13 How. St. Tr. 537, 591-592 (H.C. 1696) (Powys) ("[T]hat which they would offer is something that Mr. Goodman hath sworn when he was examined ...; sir J.F. not being present or privy, and no opportunity given to cross-examine the person; and I conceive that cannot be offered as evidence ..."); *id.*, at 592 (Shower) ("[N]o deposition of a person can be read, though beyond sea, unless in cases where the party it is to be read *46 against was privy to the examination, and might have cross-examined him [O]ur constitution is, that the person shall see his accuser"). The examination was nonetheless admitted on a closely divided vote after several of those present opined that the common-law rules of procedure did not apply to parliamentary attainder proceedings—one speaker even admitting that the evidence would normally be inadmissible. See *id.*, at 603-604 (Williamson); *id.*, at 604-605 (Chancellor of the Exchequer); *id.*, at 607; 3 Wigmore § 1364, at 22-23, n. 54. Fenwick was condemned, but the proceedings "must have burned into the general consciousness the vital importance of the rule securing the right of cross-examination." *Id.*, § 1364, at 22; cf. *Carmell v. Texas*, 529 U.S. 513, 526-530, 120 S.Ct. 1620, 146 L.Ed.2d 577 (2000).

Paine had settled the rule requiring a prior opportunity for cross-examination as a matter of common law, but some doubts remained over whether the Marian statutes prescribed an exception to it in felony cases. The statutes did not identify the circumstances under which examinations were admissible, see 1 & 2 Phil. & M., c. 13 (1554); 2 & 3 *id.*, c. 10 (1555), and some inferred that no prior opportunity for cross-examination was required. See *Westbeer*, *supra*, at 12, 168 Eng. Rep., at 109; compare *Fenwick's Case*, 13 How. St. Tr., at 596 (Sloane), with *id.*, at 602 (Musgrave). Many who expressed this view acknowledged that it meant the statutes were in derogation of the

common law. See *King v. Eriswell*, 3 T.R. 707, 710, 100 Eng. Rep. 815, 817 (K.B.1790) (Grose, J.) (dicta); *id.*, at 722-723, 100 Eng. Rep., at 823-824 (Kenyon, C.J.) (same); compare 1 Gilbert, Evidence, at 215 (admissible only “by Force ‘of the Statute’ ”), with *id.*, at 65. Nevertheless, by 1791 (the year the Sixth Amendment was ratified), courts were applying the cross-examination rule even to examinations by justices of the peace in felony cases. See *King v. Dingler*, 2 Leach 561, 562-563, 168 Eng. Rep. 383, 383-384 (1791); *King v. Woodcock*, 1 Leach 500, 502-504, 168 Eng. Rep. 352, 353 (1789); *47 cf. *King v. Radbourne*, 1 Leach 457, 459-461, 168 Eng. Rep. 330, 331-332 (1787); 3 Wigmore § 1364, at 23. Early 19th-century treatises confirm that requirement. See 1 T. Starkie, Evidence 95 (1826); 2 *id.*, at 484-492; T. Peake, Evidence 63-64 (3d ed. 1808). When Parliament amended the statutes in 1848 to make the requirement explicit, see 11 & 12 Vict., c. 42, § 17, the change merely “introduced in terms” what was already afforded the defendant “by the equitable construction of the law.” *Queen v. Beeston*, 29 Eng. L. & Eq. R. 527, 529 (Ct.Crim.App.1854) (Jervis, C. J.).^{FN2}

FN2. There is some question whether the requirement of a prior opportunity for cross-examination applied as well to statements taken by a coroner, which were also authorized by the Marian statutes. See 3 Wigmore § 1364, at 23 (requirement “never came to be conceded at all in England”); T. Peake, Evidence 64, n. (m) (3d ed. 1808) (not finding the point “expressly decided in any reported case”); *State v. Houser*, 26 Mo. 431, 436 (1858) (“there may be a few cases ... but the authority of such cases is questioned, even in [England], by their ablest writers on common law”); *State v. Campbell*, 30 S.C.L. 124, 130 (App.L.1844) (point “has not ... been plainly adjudged, even in the English cases”). Whatever the English rule, several early American authorities flatly rejected any special status for coroner statements. See *Houser, supra*, at 436; *Campbell, supra*, at 130; T. Cooley, Constitutional Limitations *318.

**1362 B

Controversial examination practices were also used in the Colonies. Early in the 18th century, for example, the Virginia Council protested against the Governor for having “privately issued several commissions to examine witnesses against particular men *ex parte*,” complaining that “the person accused is not admitted to be confronted with, or defend himself against his defamers.” A Memorial Concerning the Maladministrations of His Excellency Francis Nicholson, reprinted in 9 English Historical Documents 253, 257 (D. Douglas ed.1955). A decade before the Revolution, England gave jurisdiction over Stamp Act offenses to the admiralty courts, which followed civil-law rather than common-law*48 procedures and thus routinely took testimony by deposition or private judicial examination. See 5 Geo. 3, c. 12, § 57 (1765); Pollitt, The Right of Confrontation: Its History and Modern Dress, 8 J. Pub.L. 381, 396-397 (1959). Colonial representatives protested that the Act subverted their rights “by extending the jurisdiction of the courts of admiralty beyond its ancient limits.” Resolutions of the Stamp Act Congress § 8th (Oct. 19, 1765), reprinted in Sources of Our Liberties 270, 271 (R. Perry & J. Cooper eds.1959). John Adams, defending a merchant in a high-profile admiralty case, argued: “Examinations of witnesses upon Interrogatories, are only by the Civil Law. Interrogatories are unknown at common Law, and Englishmen and common Lawyers have an aversion to them if not an Abhorrence of them.” Draft of Argument in *Sewall v. Hancock* (Oct. 1768 - Mar. 1769), in 2 Legal Papers of John Adams 194, 207 (L. Wroth & H. Zobel eds.1965).

Many declarations of rights adopted around the time of the Revolution guaranteed a right of confrontation. See Virginia Declaration of Rights § 8 (1776); Pennsylvania Declaration of Rights § IX (1776); Delaware Declaration of Rights § 14 (1776); Maryland Declaration of Rights § XIX (1776); North Carolina Declaration of Rights § VII (1776); Vermont Declaration of Rights Ch. I, § X (1777); Massachusetts Declaration of Rights § XII (1780); New Hampshire Bill of Rights § XV (1783), all reprinted in 1 B. Schwartz, The Bill of Rights: A Documentary History 235, 265, 278, 282, 287, 323, 342, 377 (1971). The proposed Federal Constitution, however, did not. At the Massachusetts ratifying convention, Abraham Holmes objected to this omission precisely on the ground that it would lead to civil-law practices: “The mode of trial is altogether indetermined; ... whether [the defendant] is to be allowed to confront the witnesses, and have the advantage of cross-examination, we are not yet told [W]e shall find Congress possessed of powers enabling them to institute judicatories little less inauspicious than a certain *49 tribunal in Spain, ... the *Inquisition*.” 2 Debates on the Federal Constitution 110-111 (J. Elliot 2d ed. 1863). Similarly, a prominent Antifederalist writing under the pseudonym Federal Farmer criticized **1363 the use of “written evidence” while objecting to the omission of a vicinage right: “Nothing can be more essential than the cross examining [of] witnesses, and generally before the triers of the facts in question [W]ritten evidence ... [is] almost useless; it must be frequently taken *ex parte*, and but very seldom leads to the proper discovery of truth.” R. Lee, Letter IV by the Federal Farmer (Oct. 15, 1787), reprinted in 1 Schwartz, *supra*, at 469, 473. The First Congress

responded by including the Confrontation Clause in the proposal that became the Sixth Amendment.

Early state decisions shed light upon the original understanding of the common-law right. *State v. Webb*, 2 N.C. 103 (Super. L. & Eq. 1794) (*per curiam*), decided a mere three years after the adoption of the Sixth Amendment, held that depositions could be read against an accused only if they were taken in his presence. Rejecting a broader reading of the English authorities, the court held: “[I]t is a rule of the common law, founded on natural justice, that no man shall be prejudiced by evidence which he had not the liberty to cross examine.” *Id.*, at 104.

Similarly, in *State v. Campbell*, 30 S.C.L. 124, 1844 WL 2558 (App.L.1844), South Carolina's highest law court excluded a deposition taken by a coroner in the absence of the accused. It held: “[I]f we are to decide the question by the established rules of the common law, there could not be a dissenting voice. For, notwithstanding the death of the witness, and whatever the respectability of the court taking the depositions, the solemnity of the occasion and the weight of the testimony, such depositions are *ex parte*, and, therefore, utterly incompetent.” *Id.*, at 125. The court said that one of the “indispensable conditions” implicitly guaranteed by the State Constitution was that “prosecutions be carried on *50 to the conviction of the accused, by witnesses confronted by him, and subjected to his personal examination.” *Ibid.*

Many other decisions are to the same effect. Some early cases went so far as to hold that prior testimony was inadmissible in criminal cases *even if* the accused had a previous opportunity to cross-examine. See *Finn v. Commonwealth*, 26 Va. 701, 708 (1827); *State v. Atkins*, 1 Tenn. 229 (Super. L. & Eq. 1807) (*per curiam*). Most courts rejected that view, but only after reaffirming that admissibility depended on a prior opportunity for cross-examination. See *United States v. Macomb*, 26 F.Cas. 1132, 1133 (No. 15,702) (CC Ill. 1851); *State v. Houser*, 26 Mo. 431, 435-436 (1858); *Kendrick v. State*, 29 Tenn. 479, 485-488 (1850); *Bostick v. State*, 22 Tenn. 344, 345-346 (1842); *Commonwealth v. Richards*, 35 Mass. 434, 437 (1837); *State v. Hill*, 20 S.C.L. 607, 608-610 (App. 1835); *Johnston v. State*, 10 Tenn. 58, 59 (Err. & App. 1821). Nineteenth-century treatises confirm the rule. See 1 J. Bishop, *Criminal Procedure* § 1093, p. 689 (2d ed. 1872); T. Cooley, *Constitutional Limitations* *318.

III

This history supports two inferences about the meaning of the Sixth Amendment.

A

[1] First, the principal evil at which the Confrontation Clause was directed was the civil-law mode of criminal procedure, and particularly its use of *ex parte* examinations as evidence against the accused. It was these practices that the Crown deployed in notorious treason cases like Raleigh's; that the Marian statutes invited; that English law's assertion of a right to confrontation was meant to prohibit; and that the founding-era rhetoric decried. The Sixth Amendment must be interpreted with this focus in mind.

****1364** [2] Accordingly, we once again reject the view that the Confrontation Clause applies of its own force only to in-court testimony, and that its application to out-of-court statements *51 introduced at trial depends upon “the law of Evidence for the time being.” 3 Wigmore § 1397, at 101; accord, *Dutton v. Evans*, 400 U.S. 74, 94, 91 S.Ct. 210, 27 L.Ed.2d 213 (1970) (Harlan, J., concurring in result). Leaving the regulation of out-of-court statements to the law of evidence would render the Confrontation Clause powerless to prevent even the most flagrant inquisitorial practices. Raleigh was, after all, perfectly free to confront those who read Cobham's confession in court.

This focus also suggests that not all hearsay implicates the Sixth Amendment's core concerns. An off-hand, overheard remark might be unreliable evidence and thus a good candidate for exclusion under hearsay rules, but it bears little resemblance to the civil-law abuses the Confrontation Clause targeted. On the other hand, *ex parte* examinations might sometimes be admissible under modern hearsay rules, but the Framers certainly would not have condoned them.

[3] The text of the Confrontation Clause reflects this focus. It applies to “witnesses” against the accused—in other words, those who “bear testimony.” 2 N. Webster, *An American Dictionary of the English Language* (1828). “Testimony,” in turn, is typically “[a] solemn declaration or affirmation made for the purpose of establishing or proving some fact.” *Ibid.* An accuser who makes a formal statement to government officers bears testimony in a

sense that a person who makes a casual remark to an acquaintance does not. The constitutional text, like the history underlying the common-law right of confrontation, thus reflects an especially acute concern with a specific type of out-of-court statement.

[4] Various formulations of this core class of “testimonial” statements exist: “*ex parte* in-court testimony or its functional equivalent—that is, material such as affidavits, custodial examinations, prior testimony that the defendant was unable to cross-examine, or similar pretrial statements that declarants would reasonably expect to be used prosecutorially,” Brief for Petitioner 23; “extrajudicial statements ... *52 contained in formalized testimonial materials, such as affidavits, depositions, prior testimony, or confessions,” *White v. Illinois*, 502 U.S. 346, 365, 112 S.Ct. 736, 116 L.Ed.2d 848 (1992) (THOMAS, J., joined by SCALIA, J., concurring in part and concurring in judgment); “statements that were made under circumstances which would lead an objective witness reasonably to believe that the statement would be available for use at a later trial,” Brief for National Association of Criminal Defense Lawyers et al. as *Amici Curiae* 3. These formulations all share a common nucleus and then define the Clause's coverage at various levels of abstraction around it. Regardless of the precise articulation, some statements qualify under any definition—for example, *ex parte* testimony at a preliminary hearing.

Statements taken by police officers in the course of interrogations are also testimonial under even a narrow standard. Police interrogations bear a striking resemblance to examinations by justices of the peace in England. The statements are not *sworn* testimony, but the absence of oath was not dispositive. Cobham's examination was unsworn, see 1 Jardine, *Criminal Trials*, at 430, yet Raleigh's trial has long been thought a paradigmatic confrontation violation, see, e.g., *Campbell*, 30 S.C.L., at 130. Under the Marian statutes, witnesses were typically put on oath, **1365 but suspects were not. See 2 Hale, *Pleas of the Crown*, at 52. Yet Hawkins and others went out of their way to caution that such unsworn confessions were not admissible against anyone but the confessor. See *supra*, at 1360.^{FN3}

FN3. These sources—especially Raleigh's trial—refute THE CHIEF JUSTICE's assertion, *post*, at 1375 (opinion concurring in judgment), that the right of confrontation was not particularly concerned with unsworn testimonial statements. But even if, as he claims, a general bar on unsworn hearsay made application of the Confrontation Clause to unsworn testimonial statements a moot point, that would merely change our focus from direct evidence of original meaning of the Sixth Amendment to reasonable inference. We find it implausible that a provision which concededly condemned trial by sworn *ex parte* affidavit thought trial by *unsworn ex parte* affidavit perfectly OK. (The claim that unsworn testimony was self-regulating because jurors would disbelieve it, cf. *post*, at 1374, n. 1, is belied by the very existence of a general bar on unsworn testimony.) Any attempt to determine the application of a constitutional provision to a phenomenon that did not exist at the time of its adoption (here, allegedly, admissible unsworn testimony) involves some degree of estimation—what THE CHIEF JUSTICE calls use of a “proxy,” *post*, at 1375—but that is hardly a reason not to make the estimation as accurate as possible. Even if, as THE CHIEF JUSTICE mistakenly asserts, there were no direct evidence of how the Sixth Amendment originally applied to unsworn testimony, there is no doubt what its application would have been.

*53 That interrogators are police officers rather than magistrates does not change the picture either. Justices of the peace conducting examinations under the Marian statutes were not magistrates as we understand that office today, but had an essentially investigative and prosecutorial function. See 1 Stephen, *Criminal Law of England*, at 221; Langbein, *Prosecuting Crime in the Renaissance*, at 34-45. England did not have a professional police force until the 19th century, see 1 Stephen, *supra*, at 194-200, so it is not surprising that other government officers performed the investigative functions now associated primarily with the police. The involvement of government officers in the production of testimonial evidence presents the same risk, whether the officers are police or justices of the peace.

In sum, even if the Sixth Amendment is not solely concerned with testimonial hearsay, that is its primary object, and interrogations by law enforcement officers fall squarely within that class.^{FN4}

FN4. We use the term “interrogation” in its colloquial, rather than any technical legal, sense. Cf. *Rhode Island v. Innis*, 446 U.S. 291, 300-301, 100 S.Ct. 1682, 64 L.Ed.2d 297 (1980). Just as various definitions of “testimonial” exist, one can imagine various definitions of “interrogation,” and we need not select

among them in this case. Sylvia's recorded statement, knowingly given in response to structured police questioning, qualifies under any conceivable definition.

B

[5] The historical record also supports a second proposition: that the Framers would not have allowed admission of testimonial*54 statements of a witness who did not appear at trial unless he was unavailable to testify, and the defendant had had a prior opportunity for cross-examination. The text of the Sixth Amendment does not suggest any open-ended exceptions from the confrontation requirement to be developed by the courts. Rather, the “right ... to be confronted with the witnesses against him,” Amdt. 6, is most naturally read as a reference to the right of confrontation at common law, admitting only those exceptions established at the time of the founding. See *Mattox v. United States*, 156 U.S. 237, 243, 15 S.Ct. 337, 39 L.Ed. 409 (1895); cf. *Houser*, 26 Mo., at 433-435. As the English authorities above reveal,**1366 the common law in 1791 conditioned admissibility of an absent witness's examination on unavailability and a prior opportunity to cross-examine. The Sixth Amendment therefore incorporates those limitations. The numerous early state decisions applying the same test confirm that these principles were received as part of the common law in this country.^{FN5}

FN5. THE CHIEF JUSTICE claims that English law's treatment of testimonial statements was inconsistent at the time of the framing, *post*, at 1376, but the examples he cites relate to examinations under the Marian statutes. As we have explained, to the extent Marian examinations were admissible, it was only because the statutes *derogated* from the common law. See *supra*, at 1361. Moreover, by 1791 even the statutory-derogation view had been rejected with respect to justice-of-the-peace examinations—explicitly in *King v. Woodcock*, 1 Leach 500, 502-504, 168 Eng. Rep. 352, 353 (1789), and *King v. Dingler*, 2 Leach 561, 562-563, 168 Eng. Rep. 383, 383-384 (1791), and by implication in *King v. Radbourne*, 1 Leach 457, 459-461, 168 Eng. Rep. 330, 331-332 (1787).

None of THE CHIEF JUSTICE's citations proves otherwise. *King v. Westbeer*, 1 Leach 12, 168 Eng. Rep. 108 (1739), was decided a half century earlier and cannot be taken as an accurate statement of the law in 1791 given the directly contrary holdings of *Woodcock* and *Dingler*. Hale's treatise is older still, and far more ambiguous on this point, see 1 M. Hale, *Pleas of the Crown* 585-586 (1736); some who espoused the requirement of a prior opportunity for cross-examination thought it entirely consistent with Hale's views. See *Fenwick's Case*, 13 How. St. Tr. 537, 602 (H.C. 1696) (Musgrave). The only timely authority THE CHIEF JUSTICE cites is *King v. Eriswell*, 3 T.R. 707, 100 Eng. Rep. 815 (K.B.1790), but even that decision provides no substantial support. *Eriswell* was not a criminal case at all, but a Crown suit against the inhabitants of a town to charge them with care of an insane pauper. *Id.*, at 707-708, 100 Eng. Rep., at 815-816. It is relevant only because the judges discuss the Marian statutes in dicta. One of them, Buller, J., defended admission of the pauper's statement of residence on the basis of authorities that purportedly held *ex parte* Marian examinations admissible. *Id.*, at 713-714, 100 Eng. Rep., at 819. As evidence writers were quick to point out, however, his authorities said no such thing. See Peake, *Evidence*, at 64, n. (m) (“Mr. J. Buller is reported to have said that it was so settled in 1 Lev. 180, and Kel. 55; certainly nothing of the kind appears in those books”); 2 T. Starkie, *Evidence* 487-488, n. (c) (1826) (“Buller, J. ... refers to *Radbourne's* case ...; but in that case the deposition was taken in the hearing of the prisoner, and of course the question did not arise” (citation omitted)). Two other judges, Grose, J., and Kenyon, C. J., responded to Buller's argument by distinguishing Marian examinations as a statutory exception to the common-law rule, but the context and tenor of their remarks suggest they merely *assumed* the accuracy of Buller's premise without independent consideration, at least with respect to examinations by justices of the peace. See 3 T. R., at 710, 100 Eng. Rep., at 817 (Grose, J.); *id.*, at 722-723, 100 Eng. Rep., at 823-824 (Kenyon, C. J.). In fact, the case reporter specifically notes in a footnote that their assumption was erroneous. See *id.*, at 710, n. (c), 100 Eng. Rep., at 817, n. (c). Notably, Buller's position on pauper examinations was resoundingly rejected only a decade later in *King v. Ferry Frystone*, 2 East 54, 55, 102 Eng. Rep. 289 (K.B.1801) (“The point ... has been since considered to be so clear against the admissibility of the evidence ... that it was abandoned by the counsel ... without argument”), further suggesting that his views on evidence were not mainstream at the time of the framing.

In short, none of THE CHIEF JUSTICE's sources shows that the law in 1791 was unsettled *even as to*

examinations by justices of the peace under the Marian statutes. More importantly, however, even if the statutory rule in 1791 were in doubt, the numerous early state-court decisions make abundantly clear that the Sixth Amendment incorporated the *common-law* right of confrontation and not any exceptions the Marian statutes supposedly carved out from it. See *supra*, at 1363; see also *supra*, at 1361-1362, n. 2 (coroner statements). The common-law rule had been settled since *Paine* in 1696. See *King v. Paine*, 5 Mod. 163, 165, 87 Eng. Rep. 584, 585 (K.B.).

*55 We do not read the historical sources to say that a prior opportunity to cross-examine was merely a sufficient, rather than a necessary, condition for admissibility**1367 of testimonial statements. They suggest that this requirement was dispositive,*56 and not merely one of several ways to establish reliability. This is not to deny, as THE CHIEF JUSTICE notes, that “[t]here were always exceptions to the general rule of exclusion” of hearsay evidence. *Post*, at 1377. Several had become well established by 1791. See 3 Wigmore § 1397, at 101; Brief for United States as *Amicus Curiae* 13, n. 5. But there is scant evidence that exceptions were invoked to admit testimonial statements against the accused in a *criminal* case.^{FN6} Most of the hearsay exceptions covered statements that by their nature were not testimonial—for example, business records or statements in furtherance of a conspiracy. We do not infer from these that the Framers thought exceptions would apply even to prior testimony. Cf. *Lilly v. Virginia*, 527 U.S. 116, 134, 119 S.Ct. 1887, 144 L.Ed.2d 117 (1999) (plurality opinion) (“[A]ccomplices’ confessions that inculpate a criminal defendant are not within a firmly rooted exception to the hearsay rule”).^{FN7}

FN6. The one deviation we have found involves dying declarations. The existence of that exception as a general rule of criminal hearsay law cannot be disputed. See, e.g., *Mattox v. United States*, 156 U.S. 237, 243-244, 15 S.Ct. 337, 39 L.Ed. 409 (1895); *King v. Reason*, 16 How. St. Tr. 1, 24-38 (K.B.1722); 1 D. Jardine, *Criminal Trials* 435 (1832); Cooley, *Constitutional Limitations*, at *318; 1 G. Gilbert, *Evidence* 211 (C. Lofft ed. 1791); see also F. Heller, *The Sixth Amendment* 105 (1951) (asserting that this was the *only* recognized criminal hearsay exception at common law). Although many dying declarations may not be testimonial, there is authority for admitting even those that clearly are. See *Woodcock, supra*, at 501-504, 168 Eng. Rep., at 353-354; *Reason, supra*, at 24-38; Peake, *supra*, at 64; cf. *Radbourne, supra*, at 460-462, 168 Eng. Rep., at 332-333. We need not decide in this case whether the Sixth Amendment incorporates an exception for testimonial dying declarations. If this exception must be accepted on historical grounds, it is *sui generis*.

FN7. We cannot agree with THE CHIEF JUSTICE that the fact “[t]hat a statement might be testimonial does nothing to undermine the wisdom of one of these [hearsay] exceptions.” *Post*, at 1377. Involvement of government officers in the production of testimony with an eye toward trial presents unique potential for prosecutorial abuse—a fact borne out time and again throughout a history with which the Framers were keenly familiar. This consideration does not evaporate when testimony happens to fall within some broad, modern hearsay exception, even if that exception might be justifiable in other circumstances.

*57 IV

Our case law has been largely consistent with these two principles. Our leading early decision, for example, involved a deceased witness's prior trial testimony. *Mattox v. United States*, 156 U.S. 237, 15 S.Ct. 337, 39 L.Ed. 409 (1895). In allowing the statement to be admitted, we relied on the fact that the defendant had had, at the first trial, an adequate opportunity to confront the witness: “The substance of the constitutional protection is preserved to the prisoner in the advantage he has once had of seeing the witness face to face, and of subjecting him to the ordeal of a cross-examination. This, the law says, he shall under no circumstances be deprived of” *Id.*, at 244, 15 S.Ct. 337.

Our later cases conform to *Mattox's* holding that prior trial or preliminary hearing testimony is admissible only if the defendant had an adequate opportunity to cross-examine. See *Mancusi v. Stubbs*, 408 U.S. 204, 213-216, 92 S.Ct. 2308, 33 L.Ed.2d 293 (1972); *California v. Green*, 399 U.S. 149, 165-168, 90 S.Ct. 1930, 26 L.Ed.2d 489 (1970); *Pointer v. Texas*, 380 U.S., at 406-408, 85 S.Ct. 1065; cf. *Kirby v. United States*, 174 U.S. 47, 55-61, 19 S.Ct. 574, 43 L.Ed. 890 (1899). Even where the defendant had such an opportunity,**1368 we excluded the testimony where the government had not established unavailability of the witness. See *Barber v. Page*, 390 U.S. 719, 722-725, 88 S.Ct. 1318, 20 L.Ed.2d 255 (1968); cf. *Motes v. United States*, 178 U.S. 458, 470-471, 20 S.Ct. 993, 44 L.Ed. 1150 (1900). We similarly excluded accomplice confessions where the defendant had no opportunity

to cross-examine. See *Roberts v. Russell*, 392 U.S. 293, 294-295, 88 S.Ct. 1921, 20 L.Ed.2d 1100 (1968) (*per curiam*); *Bruton v. United States*, 391 U.S. 123, 126-128, 88 S.Ct. 1620, 20 L.Ed.2d 476 (1968); *Douglas v. Alabama*, 380 U.S. 415, 418-420, 85 S.Ct. 1074, 13 L.Ed.2d 934 (1965). In contrast, we considered reliability factors beyond prior opportunity for cross-examination when the hearsay statement at issue was not testimonial. See *Dutton v. Evans*, 400 U.S., at 87-89, 91 S.Ct. 210 (plurality opinion).

*58 Even our recent cases, in their outcomes, hew closely to the traditional line. *Ohio v. Roberts*, 448 U.S., at 67-70, 100 S.Ct. 2531, admitted testimony from a preliminary hearing at which the defendant had examined the witness. *Lilly v. Virginia*, *supra*, excluded testimonial statements that the defendant had had no opportunity to test by cross-examination. And *Bourjaily v. United States*, 483 U.S. 171, 181-184, 107 S.Ct. 2775, 97 L.Ed.2d 144 (1987), admitted statements made unwittingly to a Federal Bureau of Investigation informant after applying a more general test that did *not* make prior cross-examination an indispensable requirement.^{FN8}

FN8. One case arguably in tension with the rule requiring a prior opportunity for cross-examination when the proffered statement is testimonial is *White v. Illinois*, 502 U.S. 346, 112 S.Ct. 736, 116 L.Ed.2d 848 (1992), which involved, *inter alia*, statements of a child victim to an investigating police officer admitted as spontaneous declarations. *Id.*, at 349-351, 112 S.Ct. 736. It is questionable whether testimonial statements would ever have been admissible on that ground in 1791; to the extent the hearsay exception for spontaneous declarations existed at all, it required that the statements be made “immediat[ely] upon the hurt received, and before [the declarant] had time to devise or contrive any thing for her own advantage.” *Thompson v. Trevanion*, Skin. 402, 90 Eng. Rep. 179 (K.B.1693). In any case, the only question presented in *White* was whether the Confrontation Clause imposed an unavailability requirement on the types of hearsay at issue. See 502 U.S., at 348-349, 112 S.Ct. 736. The holding did not address the question whether certain of the statements, because they were testimonial, had to be excluded *even if* the witness was unavailable. We “[took] as a given ... that the testimony properly falls within the relevant hearsay exceptions.” *Id.*, at 351, n. 4, 112 S.Ct. 736.

Lee v. Illinois, 476 U.S. 530, 106 S.Ct. 2056, 90 L.Ed.2d 514 (1986), on which the State relies, is not to the contrary. There, we *rejected* the State's attempt to admit an accomplice confession. The State had argued that the confession was admissible because it “interlocked” with the defendant's. We dealt with the argument by rejecting its premise, holding that “when the discrepancies between the statements are not insignificant, the codefendant's confession may not be admitted.” *Id.*, at 545, 106 S.Ct. 2056. Respondent argues that “[t]he logical inference of this statement is *59 that when the discrepancies between the statements *are* insignificant, then the codefendant's statement *may* be admitted.” Brief for Respondent 6. But this is merely a possible inference, not an inevitable one, and we do not draw it here. If *Lee* had meant authoritatively to announce an exception-previously unknown to this Court's jurisprudence-for interlocking confessions, it would not have done so in such an oblique manner. Our only precedent on interlocking confessions had addressed the entirely different question whether a limiting instruction cured prejudice to codefendants from admitting a defendant's**1369 *own* confession against him in a joint trial. See *Parker v. Randolph*, 442 U.S. 62, 69-76, 99 S.Ct. 2132, 60 L.Ed.2d 713 (1979) (plurality opinion), abrogated by *Cruz v. New York*, 481 U.S. 186, 107 S.Ct. 1714, 95 L.Ed.2d 162 (1987).

[6] Our cases have thus remained faithful to the Framers' understanding: Testimonial statements of witnesses absent from trial have been admitted only where the declarant is unavailable, and only where the defendant has had a prior opportunity to cross-examine.^{FN9}

FN9. THE CHIEF JUSTICE complains that our prior decisions have “never drawn a distinction” like the one we now draw, citing in particular *Mattox v. United States*, 156 U.S. 237, 15 S.Ct. 337, 39 L.Ed. 409 (1895), *Kirby v. United States*, 174 U.S. 47, 19 S.Ct. 574, 43 L.Ed. 890 (1899), and *United States v. Burr*, 25 F.Cas. 187 (No. 14,694) (CC Va. 1807) (Marshall, C. J.). *Post*, at 1376-1377. But nothing in these cases contradicts our holding in any way. *Mattox* and *Kirby* allowed or excluded evidence depending on whether the defendant had had an opportunity for cross-examination. *Mattox*, *supra*, at 242-244, 15 S.Ct. 337; *Kirby*, *supra*, at 55-61, 19 S.Ct. 574. That the two cases did not extrapolate a more general class of evidence to which that criterion applied does not prevent us from doing so now. As to *Burr*, we disagree with THE CHIEF JUSTICE's reading of the case. Although Chief Justice Marshall made one passing reference to the Confrontation Clause, the case was fundamentally about the hearsay rules governing

statements in furtherance of a conspiracy. The “principle so truly important” on which “inroad[s]” had been introduced was the “rule of evidence which rejects mere hearsay testimony.” See 25 F.Cas., at 193. Nothing in the opinion concedes exceptions to the Confrontation Clause’s exclusion of testimonial statements as we use the term. THE CHIEF JUSTICE fails to identify a single case (aside from one minor, arguable exception, see *supra*, at 1368, n. 8), where we have admitted testimonial statements based on indicia of reliability other than a prior opportunity for cross-examination. If nothing else, the test we announce is an empirically accurate explanation of the results our cases have reached.

Finally, we reiterate that, when the declarant appears for cross-examination at trial, the Confrontation Clause places no constraints at all on the use of his prior testimonial statements. See *California v. Green*, 399 U.S. 149, 162, 90 S.Ct. 1930, 26 L.Ed.2d 489 (1970). It is therefore irrelevant that the reliability of some out-of-court statements “ ‘cannot be replicated, even if the declarant testifies to the same matters in court.’ ” *Post*, at 1377 (quoting *United States v. Inadi*, 475 U.S. 387, 395, 106 S.Ct. 1121, 89 L.Ed.2d 390 (1986)). The Clause does not bar admission of a statement so long as the declarant is present at trial to defend or explain it. (The Clause also does not bar the use of testimonial statements for purposes other than establishing the truth of the matter asserted. See *Tennessee v. Street*, 471 U.S. 409, 414, 105 S.Ct. 2078, 85 L.Ed.2d 425 (1985).)

*60 V

Although the results of our decisions have generally been faithful to the original meaning of the Confrontation Clause, the same cannot be said of our rationales. *Roberts* conditions the admissibility of all hearsay evidence on whether it falls under a “firmly rooted hearsay exception” or bears “particularized guarantees of trustworthiness.” 448 U.S., at 66, 100 S.Ct. 2531. This test departs from the historical principles identified above in two respects. First, it is too broad: It applies the same mode of analysis whether or not the hearsay consists of *ex parte* testimony. This often results in close constitutional scrutiny in cases that are far removed from the core concerns of the Clause. At the same time, however, the test is too narrow: It admits statements that *do* consist of *ex parte* testimony upon a mere finding of reliability. This malleable standard often fails to protect against paradigmatic confrontation violations.

Members of this Court and academics have suggested that we revise our doctrine to reflect more accurately the original understanding of the Clause. See, e.g., *Lilly*, **1370 527 U.S., at 140-143, 119 S.Ct. 1887 (BREYER, J., concurring); *White*, 502 U.S., at 366, 112 S.Ct. 736 *61 THOMAS, J., joined by SCALIA, J., concurring in part and concurring in judgment); A. Amar, *The Constitution and Criminal Procedure* 125-131 (1997); Friedman, *Confrontation: The Search for Basic Principles*, 86 *Geo. L.J.* 1011 (1998). They offer two proposals: First, that we apply the Confrontation Clause only to testimonial statements, leaving the remainder to regulation by hearsay law—thus eliminating the overbreadth referred to above. Second, that we impose an absolute bar to statements that are testimonial, absent a prior opportunity to cross-examine—thus eliminating the excessive narrowness referred to above.

In *White*, we considered the first proposal and rejected it. 502 U.S., at 352-353, 112 S.Ct. 736. Although our analysis in this case casts doubt on that holding, we need not definitively resolve whether it survives our decision today, because Sylvia Crawford’s statement is testimonial under any definition. This case does, however, squarely implicate the second proposal.

A

[7] Where testimonial statements are involved, we do not think the Framers meant to leave the Sixth Amendment’s protection to the vagaries of the rules of evidence, much less to amorphous notions of “reliability.” Certainly none of the authorities discussed above acknowledges any general reliability exception to the common-law rule. Admitting statements deemed reliable by a judge is fundamentally at odds with the right of confrontation. To be sure, the Clause’s ultimate goal is to ensure reliability of evidence, but it is a procedural rather than a substantive guarantee. It commands, not that evidence be reliable, but that reliability be assessed in a particular manner: by testing in the crucible of cross-examination. The Clause thus reflects a judgment, not only about the desirability of reliable evidence (a point on which there could be little dissent), but about how reliability can best be determined. Cf. 3 Blackstone, *Commentaries*, at 373 (“This open examination of witnesses ... is *62 much more conducive to the clearing up of truth”); M. Hale, *History and Analysis of the Common Law of England* 258 (1713) (adversarial

testing “beats and bolts out the Truth much better”).

The *Roberts* test allows a jury to hear evidence, untested by the adversary process, based on a mere judicial determination of reliability. It thus replaces the constitutionally prescribed method of assessing reliability with a wholly foreign one. In this respect, it is very different from exceptions to the Confrontation Clause that make no claim to be a surrogate means of assessing reliability. For example, the rule of forfeiture by wrongdoing (which we accept) extinguishes confrontation claims on essentially equitable grounds; it does not purport to be an alternative means of determining reliability. See *Reynolds v. United States*, 98 U.S. 145, 158-159, 25 L.Ed. 244 (1879).

The Raleigh trial itself involved the very sorts of reliability determinations that *Roberts* authorizes. In the face of Raleigh's repeated demands for confrontation, the prosecution responded with many of the arguments a court applying *Roberts* might invoke today: that Cobham's statements were self-inculpatory, 2 How. St. Tr., at 19, that they were not made in the heat of passion, *id.*, at 14, and that they were not “extracted from [him] upon any hopes or promise of Pardon,” *id.*, at 29. It is not plausible that the Framers' only objection to the trial was that Raleigh's judges did not properly weigh these factors**1371 before sentencing him to death. Rather, the problem was that the judges refused to allow Raleigh to confront Cobham in court, where he could cross-examine him and try to expose his accusation as a lie.

Dispensing with confrontation because testimony is obviously reliable is akin to dispensing with jury trial because a defendant is obviously guilty. This is not what the Sixth Amendment prescribes.

B

The legacy of *Roberts* in other courts vindicates the Framers' wisdom in rejecting a general reliability exception. *63 The framework is so unpredictable that it fails to provide meaningful protection from even core confrontation violations.

Reliability is an amorphous, if not entirely subjective, concept. There are countless factors bearing on whether a statement is reliable; the nine-factor balancing test applied by the Court of Appeals below is representative. See, e.g., *People v. Farrell*, 34 P.3d 401, 406-407 (Colo.2001) (eight-factor test). Whether a statement is deemed reliable depends heavily on which factors the judge considers and how much weight he accords each of them. Some courts wind up attaching the same significance to opposite facts. For example, the Colorado Supreme Court held a statement more reliable because its inculcation of the defendant was “detailed,” *id.*, at 407, while the Fourth Circuit found a statement more reliable because the portion implicating another was “fleeting,” *United States v. Photogrammetric Data Servs., Inc.*, 259 F.3d 229, 245 (C.A.4 2001). The Virginia Court of Appeals found a statement more reliable because the witness was in custody and charged with a crime (thus making the statement more obviously against her penal interest), see *Nowlin v. Commonwealth*, 40 Va.App. 327, 335-338, 579 S.E.2d 367, 371-372 (2003), while the Wisconsin Court of Appeals found a statement more reliable because the witness was *not* in custody and *not* a suspect, see *State v. Bintz*, 2002 WI App. 204, ¶ 13, 257 Wis.2d 177, ¶ 13, 650 N.W.2d 913, ¶ 13. Finally, the Colorado Supreme Court in one case found a statement more reliable because it was given “immediately after” the events at issue, *Farrell, supra*, at 407, while that same court, in another case, found a statement more reliable because two years had elapsed, *Stevens v. People*, 29 P.3d 305, 316 (Colo.2001).

The unpardonable vice of the *Roberts* test, however, is not its unpredictability, but its demonstrated capacity to admit core testimonial statements that the Confrontation Clause plainly meant to exclude. Despite the plurality's speculation in *Lilly*, 527 U.S., at 137, 119 S.Ct. 1887, that it was “highly unlikely” that *64 accomplice confessions implicating the accused could survive *Roberts*, courts continue routinely to admit them. See *Photogrammetric Data Servs., supra*, at 245-246; *Farrell, supra*, at 406-408; *Stevens, supra*, at 314-318; *Taylor v. Commonwealth*, 63 S.W.3d 151, 166-168 (Ky.2001); *State v. Hawkins*, No.2001-P-0060, 2002 WL 31895118, ¶¶ 34-37, *6 (Ohio App., Dec. 31, 2002); *Bintz, supra*, ¶¶ 7-14, 257 Wis.2d, at 183-188, 650 N.W.2d, at 916-918; *People v. Lawrence*, 55 P.3d 155, 160-161 (Colo.App.2001); *State v. Jones*, 171 Or.App. 375, 387-391, 15 P.3d 616, 623-625 (2000); *State v. Marshall*, 136 Ohio App.3d 742, 747-748, 737 N.E.2d 1005, 1009 (2000); *People v. Schutte*, 240 Mich.App. 713, 718-721, 613 N.W.2d 370, 376-377 (2000); *People v. Thomas*, 313 Ill.App.3d 998, 1005-1007, 246 Ill.Dec. 593, 730 N.E.2d 618, 625-626 (2000); cf. *Nowlin, supra*, at 335-338, 579 S.E.2d, at 371-372 (witness confessed to a related crime); *People v. Campbell*, 309 **1372 Ill.App.3d 423, 431-432, 242 Ill.Dec. 694, 699, 721 N.E.2d 1225, 1230 (1999) (same). One recent study found that, after *Lilly*, appellate courts admitted accomplice statements to the

authorities in 25 out of 70 cases-more than one-third of the time. Kirst, Appellate Court Answers to the Confrontation Questions in *Lilly v. Virginia*, 53 Syracuse L.Rev. 87, 105 (2003). Courts have invoked *Roberts* to admit other sorts of plainly testimonial statements despite the absence of any opportunity to cross-examine. See *United States v. Aguilar*, 295 F.3d 1018, 1021-1023 (C.A.9 2002) (plea allocution showing existence of a conspiracy); *United States v. Centracchio*, 265 F.3d 518, 527-530 (C.A.7 2001) (same); *United States v. Dolah*, 245 F.3d 98, 104-105 (C.A.2 2001) (same); *United States v. Petrillo*, 237 F.3d 119, 122-123 (C.A.2 2000) (same); *United States v. Moskowitz*, 215 F.3d 265, 268-269 (C.A.2 2000) (*per curiam*) (same); *United States v. Gallego*, 191 F.3d 156, 166-168 (C.A.2 1999) (same); *United States v. Papajohn*, 212 F.3d 1112, 1118-1120 (C.A.8 2000) (grand jury testimony); *United States v. Thomas*, 30 Fed.Appx. 277, 279 (C.A.4 2002) (*per curiam*) (same); *Bintz, supra*, ¶¶ 15-22, 257 Wis.2d, at 188-191, *65 650 N.W.2d, at 918-920 (prior trial testimony); *State v. McNeill*, 140 N.C.App. 450, 457-460, 537 S.E.2d 518, 523-524 (2000) (same).

To add insult to injury, some of the courts that admit untested testimonial statements find reliability in the very factors that *make* the statements testimonial. As noted earlier, one court relied on the fact that the witness's statement was made to police while in custody on pending charges-the theory being that this made the statement more clearly against penal interest and thus more reliable. *Nowlin, supra*, at 335-338, 579 S.E.2d, at 371-372. Other courts routinely rely on the fact that a prior statement is given under oath in judicial proceedings. *E.g., Gallego, supra*, at 168 (plea allocution); *Papajohn, supra*, at 1120 (grand jury testimony). That inculcating statements are given in a testimonial setting is not an antidote to the confrontation problem, but rather the trigger that makes the Clause's demands most urgent. It is not enough to point out that most of the usual safeguards of the adversary process attend the statement, when the single safeguard missing is the one the Confrontation Clause demands.

C

[8] *Roberts*' failings were on full display in the proceedings below. Sylvia Crawford made her statement while in police custody, herself a potential suspect in the case. Indeed, she had been told that whether she would be released "depend[ed] on how the investigation continues." App. 81. In response to often leading questions from police detectives, she implicated her husband in Lee's stabbing and at least arguably undermined his self-defense claim. Despite all this, the trial court admitted her statement, listing several reasons why it was reliable. In its opinion reversing, the Court of Appeals listed several *other* reasons why the statement was *not* reliable. Finally, the State Supreme Court relied exclusively on the interlocking character of the *66 statement and disregarded every other factor the lower courts had considered. The case is thus a self-contained demonstration of *Roberts*' unpredictable and inconsistent application.

Each of the courts also made assumptions that cross-examination might well have undermined. The trial court, for example, stated that Sylvia Crawford's statement was reliable because she was an eyewitness with direct knowledge of the events. But Sylvia at one point told the police that she had "shut [her] eyes and ... didn't really watch" part of the fight, and that she was "in shock." App. 134. **1373 The trial court also buttressed its reliability finding by claiming that Sylvia was "being questioned by law enforcement, and, thus, the [questioner] is ... neutral to her and not someone who would be inclined to advance her interests and shade her version of the truth unfavorably toward the defendant." *Id.*, at 77. The Framers would be astounded to learn that *ex parte* testimony could be admitted against a criminal defendant because it was elicited by "neutral" government officers. But even if the court's assessment of the officer's motives was accurate, it says nothing about Sylvia's perception of her situation. Only cross-examination could reveal that.

The State Supreme Court gave dispositive weight to the interlocking nature of the two statements-that they were both ambiguous as to when and whether Lee had a weapon. The court's claim that the two statements were *equally* ambiguous is hard to accept. Petitioner's statement is ambiguous only in the sense that he had lingering doubts about his recollection: "A. I could a swore I seen him goin' for somethin' before, right before everything happened [B]ut I'm not positive." *Id.*, at 155. Sylvia's statement, on the other hand, is truly inscrutable, since the key timing detail was simply assumed in the leading question she was asked: "Q. Did Kenny do anything to fight back from this assault?" *Id.*, at 137 (punctuation added). Moreover, Sylvia specifically*67 said Lee had nothing in his hands after he was stabbed, while petitioner was not asked about that.

The prosecutor obviously did not share the court's view that Sylvia's statement was ambiguous-he called it "damning evidence" that "completely refutes [petitioner's] claim of self-defense." Tr. 468 (Oct. 21, 1999). We have

no way of knowing whether the jury agreed with the prosecutor or the court. Far from obviating the need for cross-examination, the “interlocking” ambiguity of the two statements made it all the more imperative that they be tested to tease out the truth.

We readily concede that we could resolve this case by simply reweighing the “reliability factors” under *Roberts* and finding that Sylvia Crawford's statement falls short. But we view this as one of those rare cases in which the result below is so improbable that it reveals a fundamental failure on our part to interpret the Constitution in a way that secures its intended constraint on judicial discretion. Moreover, to reverse the Washington Supreme Court's decision after conducting our own reliability analysis would perpetuate, not avoid, what the Sixth Amendment condemns. The Constitution prescribes a procedure for determining the reliability of testimony in criminal trials, and we, no less than the state courts, lack authority to replace it with one of our own devising.

We have no doubt that the courts below were acting in utmost good faith when they found reliability. The Framers, however, would not have been content to indulge this assumption. They knew that judges, like other government officers, could not always be trusted to safeguard the rights of the people; the likes of the dread Lord Jeffreys were not yet too distant a memory. They were loath to leave too much discretion in judicial hands. Cf. U.S. Const., Amdt. 6 (criminal jury trial); Amdt. 7 (civil jury trial); *Ring v. Arizona*, 536 U.S. 584, 611-612, 122 S.Ct. 2428, 153 L.Ed.2d 556 (2002) (SCALIA, J., concurring). By replacing categorical constitutional guarantees with *68 open-ended balancing tests, we do violence to their design. Vague standards are manipulable, and, while that might be a small concern in run-of-the-mill assault prosecutions like this one, the Framers had an eye toward politically charged cases like Raleigh's-great state trials where the **1374 impartiality of even those at the highest levels of the judiciary might not be so clear. It is difficult to imagine *Roberts*' providing any meaningful protection in those circumstances.

* * *

Where nontestimonial hearsay is at issue, it is wholly consistent with the Framers' design to afford the States flexibility in their development of hearsay law-as does *Roberts*, and as would an approach that exempted such statements from Confrontation Clause scrutiny altogether. Where testimonial evidence is at issue, however, the Sixth Amendment demands what the common law required: unavailability and a prior opportunity for cross-examination. We leave for another day any effort to spell out a comprehensive definition of “testimonial.”^{FN10} Whatever else the term covers, it applies at a minimum to prior testimony at a preliminary hearing, before a grand jury, or at a former trial; and to police interrogations. These are the modern practices with closest kinship to the abuses at which the Confrontation Clause was directed.

FN10. We acknowledge THE CHIEF JUSTICE's objection, *post*, at 1378, that our refusal to articulate a comprehensive definition in this case will cause interim uncertainty. But it can hardly be any worse than the status quo. See *supra*, at 1371-1373, and cases cited. The difference is that the *Roberts* test is *inherently*, and therefore *permanently*, unpredictable.

In this case, the State admitted Sylvia's testimonial statement against petitioner, despite the fact that he had no opportunity to cross-examine her. That alone is sufficient to make out a violation of the Sixth Amendment. *Roberts* notwithstanding, we decline to mine the record in search of indicia of reliability. Where testimonial statements are at *69 issue, the only indicium of reliability sufficient to satisfy constitutional demands is the one the Constitution actually prescribes: confrontation.

The judgment of the Washington Supreme Court is reversed, and the case is remanded for further proceedings not inconsistent with this opinion.

It is so ordered.

Chief Justice REHNQUIST, with whom Justice O'CONNOR joins, concurring in the judgment.

*** OPINION OMITTED ***

Supreme Court of the United States
Adrian Martell DAVIS, Petitioner,
v.
WASHINGTON.
Hershel Hammon, Petitioner,
v.
Indiana.

Nos. 05–5224, 05–5705.
Argued March 20, 2006.
Decided June 19, 2006.

Justice SCALIA delivered the opinion of the Court.

*817 These cases require us to determine when statements made to law enforcement personnel during a 911 call or at a crime scene are “testimonial” and thus subject to the requirements of the Sixth Amendment’s Confrontation Clause.

I
A

The relevant statements in *Davis v. Washington*, No. 05–5224, were made to a 911 emergency operator on February 1, 2001. When the operator answered the initial call, the connection terminated before anyone spoke. She reversed the call, **2271 and Michelle McCottry answered. In the ensuing conversation, the operator ascertained that McCottry was involved in a domestic disturbance with her former boyfriend Adrian Davis, the petitioner in this case:

“911 Operator: Hello.

“Complainant: Hello.

“911 Operator: What's going on?

“Complainant: He's here jumpin' on me again.

“911 Operator: Okay. Listen to me carefully. Are you in a house or an apartment?

“Complainant: I'm in a house.

“911 Operator: Are there any weapons?

“Complainant: No. He's usin' his fists.

“911 Operator: Okay. Has he been drinking?

“Complainant: No.

“911 Operator: Okay, sweetie. I've got help started. Stay on the line with me, okay?

“Complainant: I'm on the line.

*818 “911 Operator: Listen to me carefully. Do you know his last name?

“Complainant: It's Davis.

“911 Operator: Davis? Okay, what's his first name?

“Complainant: Adrian

“911 Operator: What is it?

“Complainant: Adrian.

“911 Operator: Adrian?

“Complainant: Yeah.

“911 Operator: Okay. What's his middle initial?

“Complainant: Martell. He's runnin' now.” App. in No. 05–5224, pp. 8–9.

As the conversation continued, the operator learned that Davis had “just r [un] out the door” after hitting McCottry, and that he was leaving in a car with someone else. *Id.*, at 9–10. McCottry started talking, but the operator cut her off, saying, “Stop talking and answer my questions.” *Id.*, at 10. She then gathered more information about Davis (including his birthday), and learned that Davis had told McCottry that his purpose in coming to the house was “to get his stuff,” since McCottry was moving. *Id.*, at 11–12. McCottry described the context of the assault, *id.*, at 12, after which the operator told her that the police were on their way. “They're gonna check the area for him first,” the operator said, “and then they're gonna come talk to you.” *Id.*, at 12–13.

The police arrived within four minutes of the 911 call and observed McCottry's shaken state, the “fresh injuries on her forearm and her face,” and her “frantic efforts to gather her belongings and her children so that they could leave the residence.” 154 Wash.2d 291, 296, 111 P.3d 844, 847 (2005) (en banc).

The State charged Davis with felony violation of a domestic no-contact order. “The State's only witnesses were the two police officers who responded to the 911 call. Both officers testified that McCottry exhibited injuries that appeared *819 to be recent, but neither officer could testify as to the cause of the injuries.” *Ibid.* McCottry presumably could have testified as to whether Davis was her assailant, but she did not appear. Over Davis's objection, based on the Confrontation Clause of the Sixth Amendment, the trial court admitted the recording of her exchange with the 911 operator, and the jury convicted him. The Washington Court of Appeals affirmed, 116 Wash.App. 81, 64 P.3d 661 (2003). The Supreme Court of Washington, with one dissenting justice, also affirmed, concluding that the portion of the 911 conversation in which McCottry identified Davis was not testimonial, and that if other portions of the conversation were testimonial, **2272 admitting them was harmless beyond a reasonable doubt. 154 Wash.2d, at 305, 111 P.3d, at 851. We granted certiorari. 546 U.S. 975, 126 S.Ct. 552, 163 L.Ed.2d 459 (2005).

B

In *Hammon v. Indiana*, No. 05–5705, police responded late on the night of February 26, 2003, to a “reported domestic disturbance” at the home of Hershel and Amy Hammon. 829 N.E.2d 444, 446 (Ind.2005). They found Amy alone on the front porch, appearing “ ‘somewhat frightened,’ ” but she told them that “ ‘nothing was the matter,’ ” *id.*, at 446, 447. She gave them permission to enter the house, where an officer saw “a gas heating unit in the corner of the living room” that had “flames coming out of the ... partial glass front. There were pieces of glass on the ground in front of it and there was flame emitting from the front of the heating unit.” App. in No. 05–5705, p. 16.

Hershel, meanwhile, was in the kitchen. He told the police “that he and his wife had ‘been in an argument’ but

‘everything was fine now’ and the argument ‘never became physical.’ ” 829 N.E.2d, at 447. By this point Amy had come back inside. One of the officers remained with Hershel; the other went to the living room to talk with Amy, and “again asked [her] what had occurred.” *Ibid.*; App. in No. 05–5705, at 17, 32. Hershel made several attempts to *820 participate in Amy’s conversation with the police, see *id.*, at 32, but was rebuffed. The officer later testified that Hershel “became angry when I insisted that [he] stay separated from Mrs. Hammon so that we can investigate what had happened.” *Id.*, at 34. After hearing Amy’s account, the officer “had her fill out and sign a battery affidavit.” *Id.*, at 18. Amy handwrote the following: “Broke our Furnace & shoved me down on the floor into the broken glass. Hit me in the chest and threw me down. Broke our lamps & phone. Tore up my van where I couldn’t leave the house. Attacked my daughter.” *Id.*, at 2.

The State charged Hershel with domestic battery and with violating his probation. Amy was subpoenaed, but she did not appear at his subsequent bench trial. The State called the officer who had questioned Amy, and asked him to recount what Amy told him and to authenticate the affidavit. Hershel’s counsel repeatedly objected to the admission of this evidence. See *id.*, at 11, 12, 13, 17, 19, 20, 21. At one point, after hearing the prosecutor defend the affidavit because it was made “under oath,” defense counsel said, “That doesn’t give us the opportunity to cross examine [the] person who allegedly drafted it. Makes me mad.” *Id.*, at 19. Nonetheless, the trial court admitted the affidavit as a “present sense impression,” *id.*, at 20, and Amy’s statements as “excited utterances” that “are expressly permitted in these kinds of cases even if the declarant is not available to testify,” *id.*, at 40. The officer thus testified that Amy

“informed me that she and Hershel had been in an argument. That he became irrate [sic] over the fact of their daughter going to a boyfriend’s house. The argument became ... physical after being verbal and she informed me that Mr. Hammon, during the verbal part of the argument was breaking things in the living room and I believe she stated he broke the phone, broke the lamp, broke the front of the heater. When it became physical he threw her down into the glass of the heater.

.....

*821 “She informed me Mr. Hammon had pushed her onto the ground, had shoved her head into the broken glass of **2273 the heater and that he had punched her in the chest twice I believe.” *Id.*, at 17–18.

The trial judge found Hershel guilty on both charges, *id.*, at 40, and the Indiana Court of Appeals affirmed in relevant part, 809 N.E.2d 945 (2004). The Indiana Supreme Court also affirmed, concluding that Amy’s statement was admissible for state-law purposes as an excited utterance, 829 N.E.2d, at 449; that “a ‘testimonial’ statement is one given or taken in significant part for purposes of preserving it for potential future use in legal proceedings,” where “the motivations of the questioner and declarant are the central concerns,” *id.*, at 456, 457; and that Amy’s oral statement was not “testimonial” under these standards, *id.*, at 458. It also concluded that, although the affidavit was testimonial and thus wrongly admitted, it was harmless beyond a reasonable doubt, largely because the trial was to the bench. *Id.*, at 458–459. We granted certiorari. 546 U.S. 975, 126 S.Ct. 552, 163 L.Ed.2d 459 (2005).

II

The Confrontation Clause of the Sixth Amendment provides: “In all criminal prosecutions, the accused shall enjoy the right ... to be confronted with the witnesses against him.” In *Crawford v. Washington*, 541 U.S. 36, 53–54, 124 S.Ct. 1354, 158 L.Ed.2d 177 (2004), we held that this provision bars “admission of testimonial statements of a witness who did not appear at trial unless he was unavailable to testify, and the defendant had had a prior opportunity for cross-examination.” A critical portion of this holding, and the portion central to resolution of the two cases now before us, is the phrase “testimonial statements.” Only statements of this sort cause the declarant to be a “witness” within the meaning of the Confrontation Clause. See *id.*, at 51, 124 S.Ct. 1354. It is the testimonial character of the statement that separates it from other hearsay that, while subject to traditional limitations upon hearsay evidence, is not subject to the Confrontation Clause.

*822 Our opinion in *Crawford* set forth “[v]arious formulations” of the core class of “ ‘testimonial’ ” statements, *ibid.*, but found it unnecessary to endorse any of them, because “some statements qualify under any definition,” *id.*, at 52, 124 S.Ct. 1354. Among those, we said, were “[s]tatements taken by police officers in the

course of interrogations,” *ibid.*; see also *id.*, at 53, 124 S.Ct. 1354. The questioning that generated the deponent's statement in *Crawford*—which was made and recorded while she was in police custody, after having been given *Miranda* warnings as a possible suspect herself—“qualifies under any conceivable definition” of an “‘interrogation,’ ” 541 U.S., at 53, n. 4, 124 S.Ct. 1354. We therefore did not define that term, except to say that “[w]e use [it] ... in its colloquial, rather than any technical legal, sense,” and that “one can imagine various definitions ..., and we need not select among them in this case.” *Ibid.* The character of the statements in the present cases is not as clear, and these cases require us to determine more precisely which police interrogations produce testimony.

[1][2] Without attempting to produce an exhaustive classification of all conceivable statements—or even all conceivable statements in response to police interrogation—as either testimonial or nontestimonial, it suffices to decide the present cases to hold as follows: Statements are nontestimonial when made in the course of police interrogation under circumstances objectively indicating that the primary purpose of the interrogation is to enable police assistance to meet an ongoing emergency. They are testimonial when the circumstances objectively indicate that there is no **2274 such ongoing emergency, and that the primary purpose of the interrogation is to establish or prove past events potentially relevant to later criminal prosecution.^{FN1}

FN1. Our holding refers to interrogations because, as explained below, the statements in the cases presently before us are the products of interrogations—which in some circumstances tend to generate testimonial responses. This is not to imply, however, that statements made in the absence of any interrogation are necessarily nontestimonial. The Framers were no more willing to exempt from cross-examination volunteered testimony or answers to open-ended questions than they were to exempt answers to detailed interrogation. (Part of the evidence against Sir Walter Raleigh was a letter from Lord Cobham that was plainly *not* the result of sustained questioning. *Raleigh's Case*, 2 How. St. Tr. 1, 27 (1603).) And of course even when interrogation exists, it is in the final analysis the declarant's statements, not the interrogator's questions, that the Confrontation Clause requires us to evaluate.

*823 III

A

[3] In *Crawford*, it sufficed for resolution of the case before us to determine that “even if the Sixth Amendment is not solely concerned with testimonial hearsay, that is its primary object, and interrogations by law enforcement officers fall squarely within that class.” *Id.*, at 53, 124 S.Ct. 1354. Moreover, as we have just described, the facts of that case spared us the need to define what we meant by “interrogations.” The *Davis* case today does not permit us this luxury of indecision. The inquiries of a police operator in the course of a 911 call^{FN2} are an interrogation in one sense, but not in a sense that “qualifies under any conceivable definition.” We must decide, therefore, whether the Confrontation Clause applies only to testimonial hearsay; and, if so, whether the recording of a 911 call qualifies.

FN2. If 911 operators are not themselves law enforcement officers, they may at least be agents of law enforcement when they conduct interrogations of 911 callers. For purposes of this opinion (and without deciding the point), we consider their acts to be acts of the police. As in *Crawford v. Washington*, 541 U.S. 36, 124 S.Ct. 1354, 158 L.Ed.2d 177 (2004), therefore, our holding today makes it unnecessary to consider whether and when statements made to someone other than law enforcement personnel are “testimonial.”

The answer to the first question was suggested in *Crawford*, even if not explicitly held:

“The text of the Confrontation Clause reflects this focus [on testimonial hearsay]. It applies to ‘witnesses’ against the accused—in other words, those who ‘bear testimony.’ 1 N. Webster, *An American Dictionary of *824 the English Language* (1828). ‘Testimony,’ in turn, is typically ‘a solemn declaration or affirmation made for the purpose of establishing or proving some fact.’ *Ibid.* An accuser who makes a formal statement to government officers bears testimony in a sense that a person who makes a casual remark to an acquaintance does not.” 541 U.S., at 51, 124 S.Ct. 1354.

A limitation so clearly reflected in the text of the constitutional provision must fairly be said to mark out not merely its “core,” but its perimeter.

We are not aware of any early American case invoking the Confrontation Clause or the common-law right to confrontation that did not clearly involve testimony as thus defined.^{FN3} Well into the 20th century, our ****2275** own Confrontation Clause jurisprudence was carefully applied only in the testimonial context. See, e.g., *Reynolds v. United States*, 98 U.S. 145, *825 158, 25 L.Ed. 244 (1879) (testimony at prior trial was subject to the Confrontation Clause, but petitioner had forfeited that right by procuring witness's absence); *Mattox v. United States*, 156 U.S. 237, 240–244, 15 S.Ct. 337, 39 L.Ed. 409 (1895) (prior trial testimony of deceased witnesses admitted because subject to cross-examination); *Kirby v. United States*, 174 U.S. 47, 55–56, 19 S.Ct. 574, 43 L.Ed. 890 (1899) (guilty pleas and jury conviction of others could not be admitted to show that property defendant received from them was stolen); *Motes v. United States*, 178 U.S. 458, 467, 470–471, 20 S.Ct. 993, 44 L.Ed. 1150 (1900) (written deposition subject to cross-examination was not admissible because witness was available); *Dowdell v. United States*, 221 U.S. 325, 330–331, 31 S.Ct. 590, 55 L.Ed. 753 (1911) (facts regarding conduct of prior trial certified to by the judge, the clerk of court, and the official reporter did not relate to defendants' guilt or innocence and hence were not statements of “witnesses” under the Confrontation Clause).

FN3. See, e.g., *State v. Webb*, 2 N.C. 103, 103–104, 1794 WL 98 (Super. L. & Eq. 1794) (*per curiam*) (excluding deposition taken in absence of the accused); *State v. Atkins*, 1 Tenn. 229, 1807 WL 107 (Super. L. & Eq. 1807) (*per curiam*) (excluding prior testimony of deceased witness); *Johnston v. State*, 10 Tenn. 58, 59, 1821 WL 401 (Err. & App. 1821) (admitting written deposition of deceased deponent, because defendant had the opportunity to cross-examine); *Finn v. Commonwealth*, 26 Va. 701, 707–708, 1827 WL 1081 (1827) (excluding prior testimony of a witness still alive, though outside the jurisdiction); *State v. Hill*, 20 S.C.L. 607, 1835 WL 1416 (App.1835) (excluding deposition of deceased victim taken in absence of the accused); *Commonwealth v. Richards*, 35 Mass. 434, 436–439, 1836 WL 2491 (1837) (excluding preliminary examination testimony of deceased witness because the witness's precise words were not available); *Bostick v. State*, 22 Tenn. 344, 1842 WL 1948 (1842) (admitting deposition of deceased where defendant declined opportunity to cross-examine); *People v. Newman*, 5 Hill 295, 1843 WL 4534 (N.Y.Sup.Ct.1843) (*per curiam*) (excluding prior trial testimony of witness who was still alive); *State v. Campbell*, 30 S.C.L. 124, 125, 1844 WL 2558 (App.L.1844) (excluding deposition taken in absence of the accused); *State v. Valentine*, 29 N.C. 225, 1847 WL 1081 (1847) (*per curiam*) (admitting preliminary examination testimony of decedent where defendant had opportunity to cross-examine); *Kendrick v. State*, 29 Tenn. 479, 491, 1850 WL 2014 (1850) (admitting testimony of deceased witness at defendant's prior trial); *State v. Houser*, 26 Mo. 431, 439–441, 1858 WL 5832 (1858) (excluding deposition of deponent who was still alive).

Even our later cases, conforming to the reasoning of *Ohio v. Roberts*, 448 U.S. 56, 100 S.Ct. 2531, 65 L.Ed.2d 597 (1980),^{FN4} never in practice dispensed with the Confrontation Clause requirements of unavailability and prior cross-examination in cases that involved testimonial hearsay, see *Crawford*, 541 U.S., at 57–59, 124 S.Ct. 1354 (citing cases), with one arguable exception, see *id.*, at 58, n. 8, 124 S.Ct. 1354 (discussing *White v. Illinois*, 502 U.S. 346, 112 S.Ct. 736, 116 L.Ed.2d 848 (1992)). Where our cases did dispense with those requirements—even under the *Roberts* approach—the statements at issue were clearly nontestimonial. See, e.g., *Bourjaily v. United States*, 483 U.S. 171, 181–184, 107 S.Ct. 2775, 97 L.Ed.2d 144 (1987) (statements made unwittingly to a Government informant); *Dutton v. Evans*, 400 U.S. 74, 87–89, 91 S.Ct. 210, 27 L.Ed.2d 213 (1970) (plurality opinion) (statements from one prisoner to another).

FN4. “*Roberts* condition[ed] the admissibility of all hearsay evidence on whether it falls under a ‘firmly rooted hearsay exception’ or bears ‘particularized guarantees of trustworthiness.’ ” *Crawford*, 541 U.S., at 60, 124 S.Ct. 1354 (quoting *Roberts*, 448 U.S., at 66, 100 S.Ct. 2531). We overruled *Roberts* in *Crawford* by restoring the unavailability and cross-examination requirements.

Most of the American cases applying the Confrontation Clause or its state constitutional or common-law counterparts*826 involved testimonial statements of the most formal sort—sworn testimony in prior judicial**2276 proceedings or formal depositions under oath—which invites the argument that the scope of the Clause is limited to that very formal category. But the English cases that were the progenitors of the Confrontation Clause did not limit the exclusionary rule to prior court testimony and formal depositions, see *Crawford*, *supra*, at 52, and n. 3, 124 S.Ct. 1354. In any event, we do not think it conceivable that the protections of the Confrontation Clause can readily be

evaded by having a note-taking policeman *recite* the unsworn hearsay testimony of the declarant, instead of having the declarant sign a deposition. Indeed, if there is one point for which no case—English or early American, state or federal—can be cited, that is it.

[4] The question before us in *Davis*, then, is whether, objectively considered, the interrogation that took place in the course of the 911 call produced testimonial statements. When we said in *Crawford*, *supra*, at 53, 124 S.Ct. 1354, that “interrogations by law enforcement officers fall squarely within [the] class” of testimonial hearsay, we had immediately in mind (for that was the case before us) interrogations solely directed at establishing the facts of a past crime, in order to identify (or provide evidence to convict) the perpetrator. The product of such interrogation, whether reduced to a writing signed by the declarant or embedded in the memory (and perhaps notes) of the interrogating officer, is testimonial. It is, in the terms of the 1828 American dictionary quoted in *Crawford*, “‘[a] solemn declaration or affirmation made for the purpose of establishing or proving some fact.’” 541 U.S., at 51, 124 S.Ct. 1354. (The solemnity of even an oral declaration of relevant past fact to an investigating officer is well enough established by the severe consequences that can attend a deliberate falsehood. See, *e.g.*, *United States v. Stewart*, 433 F.3d 273, 288 (C.A.2 2006) (false statements made to federal investigators violate 18 U.S.C. § 1001); *State v. Reed*, 2005 WI 53, *827 ¶ 30, 280 Wis.2d 68, 85, 695 N.W.2d 315, 323 (state criminal offense to “knowingly giv[e] false information to [an] officer with [the] intent to mislead the officer in the performance of his or her duty”).) A 911 call, on the other hand, and at least the initial interrogation conducted in connection with a 911 call, is ordinarily not designed primarily to “establis[h] or prov[e]” some past fact, but to describe current circumstances requiring police assistance.

The difference between the interrogation in *Davis* and the one in *Crawford* is apparent on the face of things. In *Davis*, McCottry was speaking about events *as they were actually happening*, rather than “describ [ing] past events,” *Lilly v. Virginia*, 527 U.S. 116, 137, 119 S.Ct. 1887, 144 L.Ed.2d 117 (1999) (plurality opinion). Sylvia Crawford's interrogation, on the other hand, took place hours after the events she described had occurred. Moreover, any reasonable listener would recognize that McCottry (unlike Sylvia Crawford) was facing an ongoing emergency. Although one *might* call 911 to provide a narrative report of a crime absent any imminent danger, McCottry's call was plainly a call for help against bona fide physical threat. Third, the nature of what was asked and answered in *Davis*, again viewed objectively, was such that the elicited statements were necessary to be able to *resolve* the present emergency, rather than simply to learn (as in *Crawford*) what had happened in the past. That is true even of the operator's effort to establish the identity of the assailant, so that the dispatched officers might know whether they would be encountering a violent felon. See, *e.g.*, *Hiibel v. Sixth Judicial Dist. Court of Nev., Humboldt Cty.*, 542 U.S. 177, 186, 124 S.Ct. 2451, 159 L.Ed.2d 292 (2004). And finally, the difference in the **2277 level of formality between the two interviews is striking. Crawford was responding calmly, at the station house, to a series of questions, with the officer-interrogator taping and making notes of her answers; McCottry's frantic answers were provided over the phone, in an environment that was not tranquil, or even (as far as any reasonable 911 operator could make out) safe.

*828 We conclude from all this that the circumstances of McCottry's interrogation objectively indicate its primary purpose was to enable police assistance to meet an ongoing emergency. She simply was not acting as a *witness*; she was not *testifying*. What she said was not “a weaker substitute for live testimony” at trial, *United States v. Inadi*, 475 U.S. 387, 394, 106 S.Ct. 1121, 89 L.Ed.2d 390 (1986), like Lord Cobham's statements in *Raleigh's Case*, 2 How. St. Tr. 1 (1603), or Jane Dingle's *ex parte* statements against her husband in *King v. Dingle*, 2 Leach 561, 168 Eng. Rep. 383 (1791), or Sylvia Crawford's statement in *Crawford*. In each of those cases, the *ex parte* actors and the evidentiary products of the *ex parte* communication aligned perfectly with their courtroom analogues. McCottry's emergency statement does not. No “witness” goes into court to proclaim an emergency and seek help.

Davis seeks to cast McCottry in the unlikely role of a witness by pointing to English cases. None of them involves statements made during an ongoing emergency. In *King v. Brasier*, 1 Leach 199, 168 Eng. Rep. 202 (1779), for example, a young rape victim, “immediately on her coming home, told all the circumstances of the injury” to her mother. *Id.*, at 200, 168 Eng. Rep., at 202. The case would be helpful to *Davis* if the relevant statement had been the girl's screams for aid as she was being chased by her assailant. But by the time the victim got home, her story was an account of past events.

[5] This is not to say that a conversation which begins as an interrogation to determine the need for emergency

assistance cannot, as the Indiana Supreme Court put it, “evolve into testimonial statements,” 829 N.E.2d, at 457, once that purpose has been achieved. In this case, for example, after the operator gained the information needed to address the exigency of the moment, the emergency appears to have ended (when Davis drove away from the premises). The operator then told McCottry to be quiet, and proceeded to pose a battery of questions. It could readily be maintained that, *829 from that point on, McCottry's statements were testimonial, not unlike the “structured police questioning” that occurred in *Crawford*, 541 U.S., at 53, n. 4, 124 S.Ct. 1354. This presents no great problem. Just as, for Fifth Amendment purposes, “police officers can and will distinguish almost instinctively between questions necessary to secure their own safety or the safety of the public and questions designed solely to elicit testimonial evidence from a suspect,” *New York v. Quarles*, 467 U.S. 649, 658–659, 104 S.Ct. 2626, 81 L.Ed.2d 550 (1984), trial courts will recognize the point at which, for Sixth Amendment purposes, statements in response to interrogations become testimonial. Through *in limine* procedure, they should redact or exclude the portions of any statement that have become testimonial, as they do, for example, with unduly prejudicial portions of otherwise admissible evidence. Davis's jury did not hear the *complete* 911 call, although it may well have heard some testimonial portions. We were asked to classify only McCottry's early statements identifying Davis as her assailant, and we agree with the Washington Supreme Court that they were not testimonial. That court **2278 also concluded that, even if later parts of the call were testimonial, their admission was harmless beyond a reasonable doubt. Davis does not challenge that holding, and we therefore assume it to be correct.

B

[6] Determining the testimonial or nontestimonial character of the statements that were the product of the interrogation in *Hammon* is a much easier task, since they were not much different from the statements we found to be testimonial in *Crawford*. It is entirely clear from the circumstances that the interrogation was part of an investigation into possibly criminal past conduct—as, indeed, the testifying officer expressly acknowledged, App. in No. 05–5705, at 25, 32, 34. There was no emergency in progress; the interrogating officer testified that he had heard no arguments or crashing and saw no one throw or break anything, *id.*, at 25. When the *830 officers first arrived, Amy told them that things were fine, *id.*, at 14, and there was no immediate threat to her person. When the officer questioned Amy for the second time, and elicited the challenged statements, he was not seeking to determine (as in *Davis*) “what is happening,” but rather “what happened.” Objectively viewed, the primary, if not indeed the sole, purpose of the interrogation was to investigate a possible crime—which is, of course, precisely what the officer *should* have done.

It is true that the *Crawford* interrogation was more formal. It followed a *Miranda* warning, was tape-recorded, and took place at the station house, see 541 U.S., at 53, n. 4, 124 S.Ct. 1354. While these features certainly strengthened the statements' testimonial aspect—made it more objectively apparent, that is, that the purpose of the exercise was to nail down the truth about past criminal events—none was essential to the point. It was formal enough that Amy's interrogation was conducted in a separate room, away from her husband (who tried to intervene), with the officer receiving her replies for use in his “investigat[ion].” App. in No. 05–5705, at 34. What we called the “striking resemblance” of the *Crawford* statement to civil-law *ex parte* examinations, 541 U.S., at 52, 124 S.Ct. 1354, is shared by Amy's statement here. Both declarants were actively separated from the defendant—officers forcibly prevented Hershel from participating in the interrogation. Both statements deliberately recounted, in response to police questioning, how potentially criminal past events began and progressed. And both took place some time after the events described were over. Such statements under official interrogation are an obvious substitute for live testimony, because they do precisely *what a witness does* on direct examination; they are inherently testimonial.^{FN5}

FN5. The dissent criticizes our test for being “neither workable nor a targeted attempt to reach the abuses forbidden by the [Confrontation] Clause,” *post*, at 2285 (THOMAS, J., concurring in judgment in part and dissenting in part). As to the former: We have acknowledged that our holding is not an “exhaustive classification of all conceivable statements—or even all conceivable statements in response to police interrogation,” *supra*, at 2273, but rather a resolution of the cases before us and those like them. For *those* cases, the test is objective and quite “workable.” The dissent, in attempting to formulate an exhaustive classification of its own, has not provided anything that deserves the description “workable”—unless one thinks that the distinction between “formal” and “informal” statements, see *post*, at 2282 – 2283, qualifies. And the dissent even qualifies that vague distinction by acknowledging that the Confrontation Clause “also reaches the use of technically informal statements when used to evade the formalized process,” *post*, at

2283, and cautioning that the Clause would stop the State from “us[ing] out-of-court statements as a means of circumventing the literal right of confrontation,” *ibid.* It is hard to see this as much more “predictable,” *ibid.*, than the rule we adopt for the narrow situations we address. (Indeed, under the dissent’s approach it is eminently arguable that the dissent should agree, rather than disagree, with our disposition in *Hammon v. Indiana*, No. 05–5705.)

As for the charge that our holding is not a “targeted attempt to reach the abuses forbidden by the [Confrontation] Clause,” *post*, at 2285, which the dissent describes as the depositions taken by Marian magistrates, characterized by a high degree of formality, see *post*, at 2281 – 2282: We do not dispute that formality is indeed essential to testimonial utterance. But we no longer have examining Marian magistrates; and we do have, as our 18th-century forebears did not, examining police officers, see L. Friedman, *Crime and Punishment in American History* 67–68 (1993)—who perform investigative and testimonial functions once performed by examining Marian magistrates, see J. Langbein, *The Origins of Adversary Criminal Trial* 41 (2003). It imports sufficient formality, in our view, that lies to such officers are criminal offenses. Restricting the Confrontation Clause to the precise forms against which it was originally directed is a recipe for its extinction. Cf. *Kyllo v. United States*, 533 U.S. 27, 121 S.Ct. 2038, 150 L.Ed.2d 94 (2001).

****2279 *831** Both Indiana and the United States as *amicus curiae* argue that this case should be resolved much like *Davis*. For the reasons we find the comparison to *Crawford* compelling, we find the comparison to *Davis* unpersuasive. The statements in *Davis* were taken when McCottry was alone, not only unprotected by police (as Amy Hammon was protected), but apparently in immediate danger from Davis. She was seeking aid, not telling a story about the past. McCottry’s present-tense statements showed immediacy; ***832** Amy’s narrative of past events was delivered at some remove in time from the danger she described. And after Amy answered the officer’s questions, he had her execute an affidavit, in order, he testified, “[t]o establish events that have occurred previously.” App. in No. 05–5705, at 18.

Although we necessarily reject the Indiana Supreme Court’s implication that virtually any “initial inquiries” at the crime scene will not be testimonial, see 829 N.E.2d, at 453, 457, we do not hold the opposite—that *no* questions at the scene will yield nontestimonial answers. We have already observed of domestic disputes that “[o]fficers called to investigate ... need to know whom they are dealing with in order to assess the situation, the threat to their own safety, and possible danger to the potential victim.” *Hibel*, 542 U.S., at 186, 124 S.Ct. 2451. Such exigencies may *often* mean that “initial inquiries” produce nontestimonial statements. But in cases like this one, where Amy’s statements were neither a cry for help nor the provision of information enabling officers immediately to end a threatening situation, the fact that they were given at an alleged crime scene and were “initial inquiries” is immaterial. Cf. *Crawford*, *supra*, at 52, n. 3, 124 S.Ct. 1354.^{FN6}

FN6. Police investigations themselves are, of course, in no way impugned by our characterization of their fruits as testimonial. Investigations of past crimes prevent future harms and lead to necessary arrests. While prosecutors may hope that inculpatory “nontestimonial” evidence is gathered, this is essentially beyond police control. Their saying that an emergency exists cannot make it be so. The Confrontation Clause in no way governs police conduct, because it is the trial *use* of, not the investigatory *collection* of, *ex parte* testimonial statements which offends that provision. But neither can police conduct govern the Confrontation Clause; testimonial statements are what they are.

IV

[7] Respondents in both cases, joined by a number of their *amici*, contend that the nature of the offenses charged in these two cases—domestic violence—requires greater flexibility in the use of testimonial evidence. This particular ***833** type of crime ****2280** is notoriously susceptible to intimidation or coercion of the victim to ensure that she does not testify at trial. When this occurs, the Confrontation Clause gives the criminal a windfall. We may not, however, vitiate constitutional guarantees when they have the effect of allowing the guilty to go free. Cf. *Kyllo v. United States*, 533 U.S. 27, 121 S.Ct. 2038, 150 L.Ed.2d 94 (2001) (suppressing evidence from an illegal search). But when defendants seek to undermine the judicial process by procuring or coercing silence from witnesses and victims, the Sixth Amendment does not require courts to acquiesce. While defendants have no duty to assist the State in proving their guilt, they *do* have the duty to refrain from acting in ways that destroy the integrity of the

criminal-trial system. We reiterate what we said in *Crawford*: that “the rule of forfeiture by wrongdoing ... extinguishes confrontation claims on essentially equitable grounds.” 541 U.S., at 62, 124 S.Ct. 1354 (citing *Reynolds*, 98 U.S., at 158–159). That is, one who obtains the absence of a witness by wrongdoing forfeits the constitutional right to confrontation.

We take no position on the standards necessary to demonstrate such forfeiture, but federal courts using Federal Rule of Evidence 804(b)(6), which codifies the forfeiture doctrine, have generally held the Government to the preponderance-of-the-evidence standard, see, e.g., *United States v. Scott*, 284 F.3d 758, 762 (C.A.7 2002). State courts tend to follow the same practice, see, e.g., *Commonwealth v. Edwards*, 444 Mass. 526, 542, 830 N.E.2d 158, 172 (2005). Moreover, if a hearing on forfeiture is required, *Edwards*, for instance, observed that “hearsay evidence, including the unavailable witness's out-of-court statements, may be considered.” *Id.*, at 545, 830 N.E.2d, at 174. The *Roberts* approach to the Confrontation Clause undoubtedly made recourse to this doctrine less necessary, because prosecutors could show the “reliability” of *ex parte* statements more easily than they could show the defendant's procurement of the witness's absence. *834 *Crawford*, in overruling *Roberts*, did not destroy the ability of courts to protect the integrity of their proceedings.

We have determined that, absent a finding of forfeiture by wrongdoing, the Sixth Amendment operates to exclude Amy Hammon's affidavit. The Indiana courts may (if they are asked) determine on remand whether such a claim of forfeiture is properly raised and, if so, whether it is meritorious.

* * *

We affirm the judgment of the Supreme Court of Washington in No. 05–5224. We reverse the judgment of the Supreme Court of Indiana in No. 05–5705, and remand the case to that court for proceedings not inconsistent with this opinion.

It is so ordered.

Justice THOMAS, concurring in the judgment in part and dissenting in part.

In *Crawford v. Washington*, 541 U.S. 36, 124 S.Ct. 1354, 158 L.Ed.2d 177 (2004), we abandoned the general reliability inquiry we had long employed to judge the admissibility of hearsay evidence under the Confrontation Clause, describing that inquiry as “*inherently*, and therefore *permanently*, unpredictable.” *Id.*, at 68, n. 10, 124 S.Ct. 1354 (emphasis in original). Today, a mere two years after the Court decided *Crawford*, it adopts an equally unpredictable test, under which district courts are charged with divining the “primary purpose” of police interrogations. *Ante*, at 2273. Besides being difficult for courts to apply, this test characterizes as “testimonial,” and therefore inadmissible, evidence **2281 that bears little resemblance to what we have recognized as the evidence targeted by the Confrontation Clause. Because neither of the cases before the Court today would implicate the Confrontation Clause under an appropriately targeted standard, I concur only in the judgment in *Davis v. Washington*, No. 05–5224, and dissent from the Court's resolution of *Hammon v. Indiana*, No. 05–5705.

***** REMAINDER OF OPINION OMITTED *****

Supreme Court of the United States
Luis E. MELENDEZ-DIAZ, Petitioner,
v.
MASSACHUSETTS.

No. 07-591.
Argued Nov. 10, 2008.
Decided June 25, 2009.

Justice SCALIA delivered the opinion of the Court.

The Massachusetts courts in this case admitted into evidence affidavits reporting the results of forensic analysis which showed that material seized by the police and connected to the defendant was cocaine. The question presented is whether those affidavits are “testimonial,” rendering the affiants “witnesses” subject to the defendant's right of confrontation under the Sixth Amendment.

I

In 2001, Boston police officers received a tip that a Kmart employee, Thomas Wright, was engaging in suspicious activity. The informant reported that Wright repeatedly received phone calls at work, after each of which he would be picked up in front of the store by a blue sedan, and would return to the store a short time later. The police set up surveillance in the Kmart parking lot and witnessed this precise sequence of events. When Wright got out of the car upon his return, one of the officers detained and searched him, finding four clear white plastic bags containing a substance resembling cocaine. The officer then signaled other officers on the scene to arrest the two men in the car—one of whom was petitioner Luis Melendez-Diaz. The officers placed all three men in a police cruiser.

During the short drive to the police station, the officers observed their passengers fidgeting and making furtive movements in the back of the car. After depositing the men at the station, they searched the police cruiser and found a plastic bag containing 19 smaller plastic bags hidden in the partition between the front and back seats. They submitted the seized evidence to a state laboratory required by law to conduct chemical analysis upon police request. Mass. Gen. Laws, ch. 111, § 12 (West 2006).

Melendez-Diaz was charged with distributing cocaine and with trafficking in cocaine in an amount between 14 and 28 grams. Ch. 94C, §§ 32A, 32E(b)(1). At trial, the prosecution placed into evidence *2531 the bags seized from Wright and from the police cruiser. It also submitted three “certificates of analysis” showing the results of the forensic analysis performed on the seized substances. The certificates reported the weight of the seized bags and stated that the bags “[h]a[ve] been examined with the following results: The substance was found to contain: Cocaine.” App. to Pet. for Cert. 24a, 26a, 28a. The certificates were sworn to before a notary public by analysts at the State Laboratory Institute of the Massachusetts Department of Public Health, as required under Massachusetts law. Mass. Gen. Laws, ch. 111, § 13.

Petitioner objected to the admission of the certificates, asserting that our Confrontation Clause decision in *Crawford v. Washington*, 541 U.S. 36, 124 S.Ct. 1354, 158 L.Ed.2d 177 (2004), required the analysts to testify in person. The objection was overruled, and the certificates were admitted pursuant to state law as “prima facie evidence of the composition, quality, and the net weight of the narcotic ... analyzed.” Mass. Gen. Laws, ch. 111, § 13.

The jury found Melendez-Diaz guilty. He appealed, contending, among other things, that admission of the certificates violated his Sixth Amendment right to be confronted with the witnesses against him. The Appeals Court of Massachusetts rejected the claim, affirmance order, 69 Mass.App. 1114, 870 N.E.2d 676, 2007 WL 2189152, *4, n. 3 (July 31, 2007), relying on the Massachusetts Supreme Judicial Court's decision in *Commonwealth v. Verde*, 444 Mass. 279, 283-285, 827 N.E.2d 701, 705-706 (2005), which held that the authors of certificates of forensic analysis are not subject to confrontation under the Sixth Amendment. The Supreme Judicial Court denied review.

449 Mass. 1113, 874 N.E.2d 407 (2007). We granted certiorari. 552 U.S. 1256, 128 S.Ct. 1647, 170 L.Ed.2d 352 (2008).

II

[1] The Sixth Amendment to the United States Constitution, made applicable to the States via the Fourteenth Amendment, *Pointer v. Texas*, 380 U.S. 400, 403, 85 S.Ct. 1065, 13 L.Ed.2d 923 (1965), provides that “[i]n all criminal prosecutions, the accused shall enjoy the right ... to be confronted with the witnesses against him.” In *Crawford*, after reviewing the Clause’s historical underpinnings, we held that it guarantees a defendant’s right to confront those “who ‘bear testimony’ ” against him. 541 U.S., at 51, 124 S.Ct. 1354. A witness’s testimony against a defendant is thus inadmissible unless the witness appears at trial or, if the witness is unavailable, the defendant had a prior opportunity for cross-examination. *Id.*, at 54, 124 S.Ct. 1354.

Our opinion described the class of testimonial statements covered by the Confrontation Clause as follows:

“Various formulations of this core class of testimonial statements exist: *ex parte* in-court testimony or its functional equivalent—that is, material such as affidavits, custodial examinations, prior testimony that the defendant was unable to cross-examine, or similar pretrial statements that declarants would reasonably expect to be used prosecutorially; extrajudicial statements ... contained in formalized testimonial materials, such as affidavits, depositions, prior testimony, or confessions; statements that were made under circumstances which would lead an objective witness reasonably to believe that the statement would be available for use at a later trial.” *Id.*, at 51-52, 124 S.Ct. 1354 (internal quotation marks and citations omitted).

*2532 [2] There is little doubt that the documents at issue in this case fall within the “core class of testimonial statements” thus described. Our description of that category mentions affidavits twice. See also *White v. Illinois*, 502 U.S. 346, 365, 112 S.Ct. 736, 116 L.Ed.2d 848 (1992) (THOMAS, J., concurring in part and concurring in judgment) (“[T]he Confrontation Clause is implicated by extrajudicial statements only insofar as they are contained in formalized testimonial materials, such as affidavits, depositions, prior testimony, or confessions”). The documents at issue here, while denominated by Massachusetts law “certificates,” are quite plainly affidavits: “declaration [s] of facts written down and sworn to by the declarant before an officer authorized to administer oaths.” Black’s Law Dictionary 62 (8th ed.2004). They are incontrovertibly a “ ‘solemn declaration or affirmation made for the purpose of establishing or proving some fact.’ ” *Crawford, supra*, at 51, 124 S.Ct. 1354 (quoting 2 N. Webster, *An American Dictionary of the English Language* (1828)). The fact in question is that the substance found in the possession of Melendez-Diaz and his codefendants was, as the prosecution claimed, cocaine—the precise testimony the analysts would be expected to provide if called at trial. The “certificates” are functionally identical to live, in-court testimony, doing “precisely what a witness does on direct examination.” *Davis v. Washington*, 547 U.S. 813, 830, 126 S.Ct. 2266, 165 L.Ed.2d 224 (2006) (emphasis deleted).

Here, moreover, not only were the affidavits “ ‘made under circumstances which would lead an objective witness reasonably to believe that the statement would be available for use at a later trial,’ ” *Crawford, supra*, at 52, 124 S.Ct. 1354, but under Massachusetts law the *sole purpose* of the affidavits was to provide “prima facie evidence of the composition, quality, and the net weight” of the analyzed substance, Mass. Gen. Laws, ch. 111, § 13. We can safely assume that the analysts were aware of the affidavits’ evidentiary purpose, since that purpose—as stated in the relevant state-law provision—was reprinted on the affidavits themselves. See App. to Pet. for Cert. 25a, 27a, 29a.

In short, under our decision in *Crawford* the analysts’ affidavits were testimonial statements, and the analysts were “witnesses” for purposes of the Sixth Amendment. Absent a showing that the analysts were unavailable to testify at trial *and* that petitioner had a prior opportunity to cross-examine them, petitioner was entitled to “ ‘be confronted with’ ” the analysts at trial. *Crawford, supra*, at 54, 124 S.Ct. 1354.^{FN1}

FN1. Contrary to the dissent’s suggestion, *post*, at 2544 - 2545, 2546 (opinion of KENNEDY, J.), we do not hold, and it is not the case, that anyone whose testimony may be relevant in establishing the chain of custody, authenticity of the sample, or accuracy of the testing device, must appear in person as part of the prosecution’s case. While the dissent is correct that “[i]t is the obligation of the prosecution to establish the chain of custody,” *post*, at 2546, this does not mean that everyone who laid hands on the evidence must be

called. As stated in the dissent's own quotation, *ibid.*, from *United States v. Lott*, 854 F.2d 244, 250 (C.A.7 1988), “gaps in the chain [of custody] normally go to the weight of the evidence rather than its admissibility.” It is up to the prosecution to decide what steps in the chain of custody are so crucial as to require evidence; but what testimony *is* introduced must (if the defendant objects) be introduced live. Additionally, documents prepared in the regular course of equipment maintenance may well qualify as nontestimonial records. See *infra*, at 2550 - 2551, 2552.

III

Respondent and the dissent advance a potpourri of analytic arguments in an effort*2533 to avoid this rather straightforward application of our holding in *Crawford*. Before addressing them, however, we must assure the reader of the falsity of the dissent's opening alarm that we are “sweep[ing] away an accepted rule governing the admission of scientific evidence” that has been “established for at least 90 years” and “extends across at least 35 States and six Federal Courts of Appeals.” *Post*, at 2543 (opinion of KENNEDY, J.).

The vast majority of the state-court cases the dissent cites in support of this claim come not from the last 90 years, but from the last 30, and not surprisingly nearly all of them rely on our decision in *Ohio v. Roberts*, 448 U.S. 56, 100 S.Ct. 2531, 65 L.Ed.2d 597 (1980), or its since-rejected theory that uncontroverted testimony was admissible as long as it bore indicia of reliability, *id.*, at 66, 100 S.Ct. 2531. See *post*, at 2559.^{FN2} As for the six Federal Courts of Appeals cases cited by the dissent, five of them postdated and expressly relied on *Roberts*. See *post*, at 2554 - 2555. The sixth predated *Roberts* but relied entirely on the same erroneous theory. See *Kay v. United States*, 255 F.2d 476, 480-481 (C.A.4 1958) (rejecting confrontation clause challenge “where there is reasonable necessity for [the evidence] and where ... the evidence has those qualities of reliability and trustworthiness”).

FN2. The exception is a single pre-*Roberts* case that relied on longstanding Massachusetts precedent. See *Commonwealth v. Harvard*, 356 Mass. 452, 462, 253 N.E.2d 346, 352 (1969). Others are simply irrelevant, since they involved medical reports created for treatment purposes, which would not be testimonial under our decision today. See, e.g., *Baber v. State*, 775 So.2d 258, 258-259 (Fla.2000); *State v. Garlick*, 313 Md. 209, 223-225, 545 A.2d 27, 34-35 (1988).

A review of cases that predate the *Roberts* era yields a mixed picture. As the dissent notes, three state supreme court decisions from the early 20th century denied confrontation with respect to certificates of analysis regarding a substance's alcohol content. See *post*, at 2554 (citing cases from Massachusetts, Connecticut, and Virginia). But other state courts in the same era reached the opposite conclusion. See *Torres v. State*, 113 Tex.Crim. 1, 18 S.W.2d 179, 180 (App.1929); *Volrich v. State*, No. 278, 1925 WL 2473 (Ohio App., Nov. 2, 1925). At least this much is entirely clear: In faithfully applying *Crawford* to the facts of this case, we are not overruling 90 years of settled jurisprudence. It is the dissent that seeks to overturn precedent by resurrecting *Roberts* a mere five years after it was rejected in *Crawford*.

We turn now to the various legal arguments raised by respondent and the dissent.

A

[3] Respondent first argues that the analysts are not subject to confrontation because they are not “accusatory” witnesses, in that they do not directly accuse petitioner of wrongdoing; rather, their testimony is inculpatory only when taken together with other evidence linking petitioner to the contraband. See Brief for Respondent 10. This finds no support in the text of the Sixth Amendment or in our case law.

The Sixth Amendment guarantees a defendant the right “to be confronted with the witnesses *against him*.” (Emphasis added.) To the extent the analysts were witnesses (a question resolved above), they certainly provided testimony *against* petitioner, proving one fact necessary for his conviction—that the substance he possessed was cocaine. The contrast between the text of the Confrontation Clause and the text of the adjacent Compulsory Process*2534 Clause confirms this analysis. While the Confrontation Clause guarantees a defendant the right to be confronted with the witnesses “against him,” the Compulsory Process Clause guarantees a defendant the right to call witnesses “in his favor.” U.S. Const., Amdt. 6. The text of the Amendment contemplates two classes of witnesses—those against the defendant and those in his favor. The prosecution *must* produce the former;^{FN3} the defendant *may*

call the latter. Contrary to respondent's assertion, there is not a third category of witnesses, helpful to the prosecution, but somehow immune from confrontation.

FN3. The right to confrontation may, of course, be waived, including by failure to object to the offending evidence; and States may adopt procedural rules governing the exercise of such objections. See *infra*, at 2554.

It is often, indeed perhaps usually, the case that an adverse witness's testimony, taken alone, will not suffice to convict. Yet respondent fails to cite a single case in which such testimony was admitted absent a defendant's opportunity to cross-examine.^{FN4} Unsurprisingly, since such a holding would be contrary to longstanding case law. In *Kirby v. United States*, 174 U.S. 47, 19 S.Ct. 574, 43 L.Ed. 890 (1899), the Court considered Kirby's conviction for receiving stolen property, the evidence for which consisted, in part, of the records of conviction of three individuals who were found guilty of stealing the relevant property. *Id.*, at 53, 19 S.Ct. 574. Though this evidence proved only that the property was stolen, and not that Kirby received it, the Court nevertheless ruled that admission of the records violated Kirby's rights under the Confrontation Clause. *Id.*, at 55, 19 S.Ct. 574. See also *King v. Turner*, 1 Mood. 347, 168 Eng. Rep. 1298 (1832) (confession by one defendant to having stolen certain goods could not be used as evidence against another defendant accused of receiving the stolen property).

FN4. Respondent cites our decision in *Gray v. Maryland*, 523 U.S. 185, 118 S.Ct. 1151, 140 L.Ed.2d 294 (1998). That case did indeed distinguish between evidence that is “incriminating on its face” and evidence that “bec[omes] incriminating ... only when linked with evidence introduced later at trial,” *id.*, at 191, 118 S.Ct. 1151 (internal quotation marks omitted). But it did so for the entirely different purpose of determining when a nontestifying codefendant's confession, redacted to remove all mention of the defendant, could be admitted into evidence with instruction for the jury not to consider the confession as evidence against the nonconfessor. The very premise of the case was that, without the limiting instruction even admission of a redacted confession containing evidence of the latter sort *would have* violated the defendant's Sixth Amendment rights. See *id.*, at 190-191, 118 S.Ct. 1151.

B

[4] Respondent and the dissent argue that the analysts should not be subject to confrontation because they are not “conventional” (or “typical” or “ordinary”) witnesses of the sort whose *ex parte* testimony was most notoriously used at the trial of Sir Walter Raleigh. *Post*, at 2550 - 2551; Brief for Respondent 28. It is true, as the Court recognized in *Crawford*, that *ex parte* examinations of the sort used at Raleigh's trial have “long been thought a paradigmatic confrontation violation.” 541 U.S., at 52, 124 S.Ct. 1354. But the paradigmatic case identifies the core of the right to confrontation, not its limits. The right to confrontation was not invented in response to the use of the *ex parte* examinations in *Raleigh's Case*, 2 How. St. Tr. 1 (1603). That use provoked such an outcry precisely because it flouted the deeply rooted common-law tradition “of live testimony in court subject to adversarial testing.” *Crawford, supra*, at 43, 124 S.Ct. 1354 (citing 3 W. Blackstone, Commentaries on the Laws of England 373-374 *2535 (1768)). See also *Crawford, supra*, at 43-47, 124 S.Ct. 1354.

In any case, the purported distinctions respondent and the dissent identify between this case and Sir Walter Raleigh's “conventional” accusers do not survive scrutiny. The dissent first contends that a “conventional witness recalls events observed in the past, while an analyst's report contains near-contemporaneous observations of the test.” *Post*, at 2551 - 2552. It is doubtful that the analyst's reports in this case could be characterized as reporting “near-contemporaneous observations”; the affidavits were completed almost a week after the tests were performed. See App. to Pet. for Cert. 24a-29a (the tests were performed on November 28, 2001, and the affidavits sworn on December 4, 2001). But regardless, the dissent misunderstands the role that “near-contemporaneity” has played in our case law. The dissent notes that that factor was given “substantial weight” in *Davis, post*, at 2551, but in fact that decision *disproves* the dissent's position. There the Court considered the admissibility of statements made to police officers responding to a report of a domestic disturbance. By the time officers arrived the assault had ended, but the victim's statements-written and oral-were sufficiently close in time to the alleged assault that the trial court admitted her affidavit as a “present sense impression.” *Davis*, 547 U.S., at 820, 126 S.Ct. 2266 (internal quotation marks omitted). Though the witness's statements in *Davis* were “near-contemporaneous” to the events she reported, we nevertheless held that they could *not* be admitted absent an opportunity to confront the witness. *Id.*, at 830, 126 S.Ct. 2266.

A second reason the dissent contends that the analysts are not “conventional witnesses” (and thus not subject to confrontation) is that they “observe[d] neither the crime nor any human action related to it.” *Post*, at 2552. The dissent provides no authority for this particular limitation of the type of witnesses subject to confrontation. Nor is it conceivable that all witnesses who fit this description would be outside the scope of the Confrontation Clause. For example, is a police officer's investigative report describing the crime scene admissible absent an opportunity to examine the officer? The dissent's novel exception from coverage of the Confrontation Clause would exempt all expert witnesses—a hardly “unconventional” class of witnesses.

A third respect in which the dissent asserts that the analysts are not “conventional” witnesses and thus not subject to confrontation is that their statements were not provided in response to interrogation. *Ibid*. See also Brief for Respondent 29. As we have explained, “[t]he Framers were no more willing to exempt from cross-examination volunteered testimony or answers to open-ended questions than they were to exempt answers to detailed interrogation.” *Davis, supra*, at 822-823, n. 1, 126 S.Ct. 2266. Respondent and the dissent cite no authority, and we are aware of none, holding that a person who volunteers his testimony is any less a “ ‘witness against’ the defendant,” Brief for Respondent 26, than one who is responding to interrogation. In any event, the analysts' affidavits in this case *were* presented in response to a police request. See Mass. Gen. Laws, ch. 111, §§ 12-13. If an affidavit submitted in response to a police officer's request to “write down what happened” suffices to trigger the Sixth Amendment's protection (as it apparently does, see *Davis*, 547 U.S., at 819-820, 126 S.Ct. 2266; *id.*, at 840, n. 5, 126 S.Ct. 2266 (THOMAS, J., concurring in judgment in part and dissenting in part)), then the analysts' testimony should be subject to confrontation as well.

***2536 C**

[5] Respondent claims that there is a difference, for Confrontation Clause purposes, between testimony recounting historical events, which is “prone to distortion or manipulation,” and the testimony at issue here, which is the “resul[t] of neutral, scientific testing.” Brief for Respondent 29. Relatedly, respondent and the dissent argue that confrontation of forensic analysts would be of little value because “one would not reasonably expect a laboratory professional ... to feel quite differently about the results of his scientific test by having to look at the defendant.” *Id.*, at 31 (internal quotation marks omitted); see *post*, at 2548 - 2549.

This argument is little more than an invitation to return to our overruled decision in *Roberts*, 448 U.S. 56, 100 S.Ct. 2531, 65 L.Ed.2d 597, which held that evidence with “particularized guarantees of trustworthiness” was admissible notwithstanding the Confrontation Clause. *Id.*, at 66, 100 S.Ct. 2531. What we said in *Crawford* in response to that argument remains true:

“To be sure, the Clause's ultimate goal is to ensure reliability of evidence, but it is a procedural rather than a substantive guarantee. It commands, not that evidence be reliable, but that reliability be assessed in a particular manner: by testing in the crucible of cross-examination. ... Dispensing with confrontation because testimony is obviously reliable is akin to dispensing with jury trial because a defendant is obviously guilty. This is not what the Sixth Amendment prescribes.” 541 U.S., at 61-62, 124 S.Ct. 1354.

Respondent and the dissent may be right that there are other ways—and in some cases better ways—to challenge or verify the results of a forensic test.^{FN5} But the Constitution guarantees one way: confrontation. We do not have license to suspend the Confrontation Clause when a preferable trial strategy is available.

FN5. Though surely not always. Some forensic analyses, such as autopsies and breathalyzer tests, cannot be repeated, and the specimens used for other analyses have often been lost or degraded.

Nor is it evident that what respondent calls “neutral scientific testing” is as neutral or as reliable as respondent suggests. Forensic evidence is not uniquely immune from the risk of manipulation. According to a recent study conducted under the auspices of the National Academy of Sciences, “[t]he majority of [laboratories producing forensic evidence] are administered by law enforcement agencies, such as police departments, where the laboratory administrator reports to the head of the agency.” National Research Council of the National Academies, *Strengthening Forensic Science in the United States: A Path Forward* 6-1 (Prepublication Copy Feb. 2009)

(hereinafter National Academy Report). And “[b]ecause forensic scientists often are driven in their work by a need to answer a particular question related to the issues of a particular case, they sometimes face pressure to sacrifice appropriate methodology for the sake of expediency.” *Id.*, at S-17. A forensic analyst responding to a request from a law enforcement official may feel pressure-or have an incentive-to alter the evidence in a manner favorable to the prosecution.

Confrontation is one means of assuring accurate forensic analysis. While it is true, as the dissent notes, that an honest analyst will not alter his testimony when forced to confront the defendant, *post*, at 2548, the same cannot be said of the fraudulent analyst. See Brief for National Innocence Network as *Amicus Curiae* 15-17 *2537 (discussing cases of documented “drylabbing” where forensic analysts report results of tests that were never performed); National Academy Report 1-8 to 1-10 (discussing documented cases of fraud and error involving the use of forensic evidence). Like the eyewitness who has fabricated his account to the police, the analyst who provides false results may, under oath in open court, reconsider his false testimony. See *Coy v. Iowa*, 487 U.S. 1012, 1019, 108 S.Ct. 2798, 101 L.Ed.2d 857 (1988). And, of course, the prospect of confrontation will deter fraudulent analysis in the first place.

Confrontation is designed to weed out not only the fraudulent analyst, but the incompetent one as well. Serious deficiencies have been found in the forensic evidence used in criminal trials. One commentator asserts that “[t]he legal community now concedes, with varying degrees of urgency, that our system produces erroneous convictions based on discredited forensics.” Metzger, *Cheating the Constitution*, 59 Vand. L.Rev. 475, 491 (2006). One study of cases in which exonerating evidence resulted in the overturning of criminal convictions concluded that invalid forensic testimony contributed to the convictions in 60% of the cases. Garrett & Neufeld, *Invalid Forensic Science Testimony and Wrongful Convictions*, 95 Va. L.Rev. 1, 14 (2009). And the National Academy Report concluded:

“The forensic science system, encompassing both research and practice, has serious problems that can only be addressed by a national commitment to overhaul the current structure that supports the forensic science community in this country.” National Academy Report P-1 (emphasis in original).^{FN6}

FN6. Contrary to the dissent's suggestion, *post*, at 2555, we do not “rel[y] in such great measure” on the deficiencies of crime-lab analysts shown by this report to resolve the constitutional question presented in this case. The analysts who swore the affidavits provided testimony against Melendez-Diaz, and they are therefore subject to confrontation; we would reach the same conclusion if all analysts always possessed the scientific acumen of Mme. Curie and the veracity of Mother Theresa. We discuss the report only to refute the suggestion that this category of evidence is uniquely reliable and that cross-examination of the analysts would be an empty formalism.

Like expert witnesses generally, an analyst's lack of proper training or deficiency in judgment may be disclosed in cross-examination.

This case is illustrative. The affidavits submitted by the analysts contained only the bare-bones statement that “[t]he substance was found to contain: Cocaine.” App. to Pet. for Cert. 24a, 26a, 28a. At the time of trial, petitioner did not know what tests the analysts performed, whether those tests were routine, and whether interpreting their results required the exercise of judgment or the use of skills that the analysts may not have possessed. While we still do not know the precise tests used by the analysts, we are told that the laboratories use “methodology recommended by the Scientific Working Group for the Analysis of Seized Drugs,” App. to Brief for Petitioner 1a-2a. At least some of that methodology requires the exercise of judgment and presents a risk of error that might be explored on cross-examination. See 2 P. Giannelli & E. Imwinkelried, *Scientific Evidence* § 23.03[c], pp. 532-533, ch. 23A, p. 607 (4th ed.2007) (identifying four “critical errors” that analysts may commit in interpreting the results of the commonly used gas chromatography/mass spectrometry analysis); Shellow, *The Application of Daubert to the Identification of Drugs*, 2 Shepard's Expert & Scientific Evidence Quarterly 593, 600 (1995) (noting that while spectrometers*2538 may be equipped with computerized matching systems, “forensic analysts in crime laboratories typically do not utilize this feature of the instrument, but rely exclusively on their subjective judgment”).

The same is true of many of the other types of forensic evidence commonly used in criminal prosecutions.

“[T]here is wide variability across forensic science disciplines with regard to techniques, methodologies, reliability, types and numbers of potential errors, research, general acceptability, and published material.” National Academy Report S-5. See also *id.*, at 5-9, 5-12, 5-17, 5-21 (discussing problems of subjectivity, bias, and unreliability of common forensic tests such as latent fingerprint analysis, pattern/impression analysis, and toolmark and firearms analysis). Contrary to respondent's and the dissent's suggestion, there is little reason to believe that confrontation will be useless in testing analysts' honesty, proficiency, and methodology-the features that are commonly the focus in the cross-examination of experts.

D

[6] Respondent argues that the analysts' affidavits are admissible without confrontation because they are “akin to the types of official and business records admissible at common law.” Brief for Respondent 35. But the affidavits do not qualify as traditional official or business records, and even if they did, their authors would be subject to confrontation nonetheless.

Documents kept in the regular course of business may ordinarily be admitted at trial despite their hearsay status. See Fed. Rule Evid. 803(6). But that is not the case if the regularly conducted business activity is the production of evidence for use at trial. Our decision in *Palmer v. Hoffman*, 318 U.S. 109, 63 S.Ct. 477, 87 L.Ed. 645 (1943), made that distinction clear. There we held that an accident report provided by an employee of a railroad company did not qualify as a business record because, although kept in the regular course of the railroad's operations, it was “calculated for use essentially in the court, not in the business.” *Id.*, at 114, 63 S.Ct. 477.^{FN7} The analysts' certificates-like police reports generated by law enforcement officials-do not qualify as business or public records for precisely the same reason. See Rule 803(8) (defining public records as “excluding, however, in criminal cases matters observed by police officers and other law enforcement personnel”).

FN7. The early common-law cases likewise involve records prepared for the administration of an entity's affairs, and not for use in litigation. See, e.g., *King v. Rhodes*, 1 Leach 24, 168 Eng. Rep. 115 (1742) (admitting into evidence ship's muster-book); *King v. Martin*, 2 Camp. 100, 101, 170 Eng. Rep. 1094, 1095 (1809) (vestry book); *King v. Aickles*, 1 Leach 390, 391-392, 168 Eng. Rep. 297, 298 (1785) (prison logbook).

Respondent seeks to rebut this limitation by noting that at common law the results of a coroner's inquest were admissible without an opportunity for confrontation. But as we have previously noted, whatever the status of coroner's reports at common law in England, they were not accorded any special status in American practice. See *Crawford*, 541 U.S., at 47, n. 2, 124 S.Ct. 1354; *Giles v. California*, 554 U.S. ----, ----, 128 S.Ct. 2678, 2705-06, 171 L.Ed.2d 488 (2008) (BREYER, J., dissenting); Evidence-Official Records-Coroner's Inquest, 65 U. Pa. L.Rev. 290 (1917).

The dissent identifies a single class of evidence which, though prepared for use at trial, was traditionally admissible: a clerk's certificate authenticating an official record-or a copy thereof-for use as evidence. See *post*, at 2552 - 2553. But a *2539 clerk's authority in that regard was narrowly circumscribed. He was permitted “to certify to the correctness of a copy of a record kept in his office,” but had “no authority to furnish, as evidence for the trial of a lawsuit, his interpretation of what the record contains or shows, or to certify to its substance or effect.” *State v. Wilson*, 141 La. 404, 409, 75 So. 95, 97 (1917). See also *State v. Champion*, 116 N.C. 987, 21 S.E. 700, 700-701 (1895); 5 J. Wigmore, Evidence § 1678 (3d ed.1940). The dissent suggests that the fact that this exception was “‘narrowly circumscribed’ ” makes no difference. See *post*, at 2553. To the contrary, it makes all the difference in the world. It shows that even the line of cases establishing the one narrow exception the dissent has been able to identify simultaneously vindicates the general rule applicable to the present case. A clerk could by affidavit *authenticate* or provide a copy of an otherwise admissible record, but could not do what the analysts did here: *create* a record for the sole purpose of providing evidence against a defendant.^{FN8}

FN8. The dissent's reliance on our decision in *Dowdell v. United States*, 221 U.S. 325, 31 S.Ct. 590, 55 L.Ed. 753 (1911), see *post*, at 2553 (opinion of KENNEDY, J.), is similarly misplaced. As the opinion stated in *Dowdell*-and as this Court noted in *Davis v. Washington*, 547 U.S. 813, 825, 126 S.Ct. 2266, 165 L.Ed.2d 224 (2006)-the judge and clerk who made the statements at issue in *Dowdell* were not witnesses for purposes of the Confrontation Clause because their statements concerned only the conduct of

defendants' prior trial, not any facts regarding defendants' guilt or innocence. 221 U.S., at 330-331, 31 S.Ct. 590.

Far more probative here are those cases in which the prosecution sought to admit into evidence a clerk's certificate attesting to the fact that the clerk had searched for a particular relevant record and failed to find it. Like the testimony of the analysts in this case, the clerk's statement would serve as substantive evidence against the defendant whose guilt depended on the nonexistence of the record for which the clerk searched. Although the clerk's certificate would qualify as an official record under respondent's definition-it was prepared by a public officer in the regular course of his official duties-and although the clerk was certainly not a "conventional witness" under the dissent's approach, the clerk was nonetheless subject to confrontation. See *People v. Bromwich*, 200 N.Y. 385, 388-389, 93 N.E. 933, 934 (1911); *People v. Goodrode*, 132 Mich. 542, 547, 94 N.W. 14, 16 (1903); Wigmore, *supra*, § 1678.^{FN9}

FN9. An earlier line of 19th century state-court cases also supports the notion that forensic analysts' certificates were not admitted into evidence as public or business records. See *Commonwealth v. Waite*, 93 Mass. 264, 266 (1865); *Shivers v. Newton*, 45 N.J.L. 469, 476 (Sup.Ct.1883); *State v. Campbell*, 64 N.H. 402, 403, 13 A. 585, 586 (1888). In all three cases, defendants-who were prosecuted for selling adulterated milk-objectioned to the admission of the state chemists' certificates of analysis. In all three cases, the objection was defeated because the chemist testified live at trial. That the prosecution came forward with live witnesses in all three cases suggests doubt as to the admissibility of the certificates without opportunity for cross-examination.

Respondent also misunderstands the relationship between the business-and-official-records hearsay exceptions and the Confrontation Clause. As we stated in *Crawford*: "Most of the hearsay exceptions covered statements that by their nature were not testimonial-for example, business records or statements in furtherance of a conspiracy." 541 U.S., at 56, 124 S.Ct. 1354. Business and public records are generally admissible absent confrontation not because they qualify under an exception to the hearsay rules, but because-having been created for the administration of an entity's affairs and not for *2540 the purpose of establishing or proving some fact at trial-they are not testimonial. Whether or not they qualify as business or official records, the analysts' statements here-prepared specifically for use at petitioner's trial-were testimony against petitioner, and the analysts were subject to confrontation under the Sixth Amendment.

E

[7] Respondent asserts that we should find no Confrontation Clause violation in this case because petitioner had the ability to subpoena the analysts. But that power-whether pursuant to state law or the Compulsory Process Clause-is no substitute for the right of confrontation. Unlike the Confrontation Clause, those provisions are of no use to the defendant when the witness is unavailable or simply refuses to appear. See, e.g., *Davis*, 547 U.S., at 820, 126 S.Ct. 2266 ("[The witness] was subpoenaed, but she did not appear at ... trial"). Converting the prosecution's duty under the Confrontation Clause into the defendant's privilege under state law or the Compulsory Process Clause shifts the consequences of adverse-witness no-shows from the State to the accused. More fundamentally, the Confrontation Clause imposes a burden on the prosecution to present its witnesses, not on the defendant to bring those adverse witnesses into court. Its value to the defendant is not replaced by a system in which the prosecution presents its evidence via *ex parte* affidavits and waits for the defendant to subpoena the affiants if he chooses.

F

Finally, respondent asks us to relax the requirements of the Confrontation Clause to accommodate the " 'necessities of trial and the adversary process.' " Brief for Respondent 59. It is not clear whence we would derive the authority to do so. The Confrontation Clause may make the prosecution of criminals more burdensome, but that is equally true of the right to trial by jury and the privilege against self-incrimination. The Confrontation Clause-like those other constitutional provisions-is binding, and we may not disregard it at our convenience.

We also doubt the accuracy of respondent's and the dissent's dire predictions. The dissent, respondent, and its *amici* highlight the substantial total number of controlled-substance analyses performed by state and federal laboratories in recent years. But only some of those tests are implicated in prosecutions, and only a small fraction of those cases actually proceed to trial. See Brief for Law Professors as *Amici Curiae* 7-8 (nearly 95% of convictions in

state and federal courts are obtained via guilty plea).^{FN10}

FN10. The dissent provides some back-of-the-envelope calculations regarding the number of court appearances that will result from today's ruling. *Post*, at 2549 - 2550. Those numbers rely on various unfounded assumptions: that the prosecution will place into evidence a drug analysis certificate in every case; that the defendant will never stipulate to the nature of the controlled substance; that even where no such stipulation is made, every defendant will object to the evidence or otherwise demand the appearance of the analyst. These assumptions are wildly unrealistic, and, as discussed below, the figures they produce do not reflect what has in fact occurred in those jurisdictions that have already adopted the rule we announce today.

Perhaps the best indication that the sky will not fall after today's decision is that it has not done so already. Many States have already adopted the constitutional rule we announce today,^{FN11} while many others*2541 permit the defendant to assert (or forfeit by silence) his Confrontation Clause right after receiving notice of the prosecution's intent to use a forensic analyst's report, *id.*, at 13-15 (cataloging such state laws). Despite these widespread practices, there is no evidence that the criminal justice system has ground to a halt in the States that, one way or another, empower a defendant to insist upon the analyst's appearance at trial. Indeed, in Massachusetts itself, a defendant may subpoena the analyst to appear at trial, see Brief for Respondent 57, and yet there is no indication that obstructionist defendants are abusing the privilege.

FN11. *State v. Johnson*, 982 So.2d 672, 680-681 (Fla.2008); *Hinojos-Mendoza v. People*, 169 P.3d 662, 666-667 (Colo.2007); *State v. Birchfield*, 342 Or. 624, 631-632, 157 P.3d 216, 220 (2007); *State v. March*, 216 S.W.3d 663, 666-667 (Mo.2007); *Thomas v. United States*, 914 A.2d 1, 12-13 (D.C.2006); *State v. Caulfield*, 722 N.W.2d 304, 310 (Minn.2006); *Las Vegas v. Walsh*, 121 Nev. 899, 904-906, 124 P.3d 203, 207-208 (2005); *People v. McClanahan*, 191 Ill.2d 127, 133-134, 246 Ill.Dec. 97, 729 N.E.2d 470, 474-475 (2000); *Miller v. State*, 266 Ga. 850, 854-855, 472 S.E.2d 74, 78-79 (1996); *Barnette v. State*, 481 So.2d 788, 792 (Miss.1985).

The dissent finds this evidence “far less reassuring than promised.” *Post*, at 2557. But its doubts rest on two flawed premises. First, the dissent believes that those state statutes “requiring the defendant to give early notice of his intent to confront the analyst,” are “burden-shifting statutes [that] may be invalidated by the Court's reasoning.” *Post*, at 2554, 2557 - 2558. That is not so. In their simplest form, notice-and-demand statutes require the prosecution to provide notice to the defendant of its intent to use an analyst's report as evidence at trial, after which the defendant is given a period of time in which he may object to the admission of the evidence absent the analyst's appearance live at trial. See, e.g., Ga.Code Ann. § 35-3-154.1 (2006); Tex.Code Crim. Proc. Ann., Art. 38.41, § 4 (Vernon 2005); Ohio Rev.Code Ann. § 2925.51(C) (West 2006). Contrary to the dissent's perception, these statutes shift no burden whatever. The defendant *always* has the burden of raising his Confrontation Clause objection; notice-and-demand statutes simply govern the *time* within which he must do so. States are free to adopt procedural rules governing objections. See *Wainwright v. Sykes*, 433 U.S. 72, 86-87, 97 S.Ct. 2497, 53 L.Ed.2d 594 (1977). It is common to require a defendant to exercise his rights under the Compulsory Process Clause in advance of trial, announcing his intent to present certain witnesses. See Fed. Rules Crim. Proc. 12.1(a), (e), 16(b)(1)(C); Comment: Alibi Notice Rules: The Preclusion Sanction as Procedural Default, 51 U. Chi. L.Rev. 254, 254-255, 281-285 (1984) (discussing and cataloguing State notice-of-alibi rules); *Taylor v. Illinois*, 484 U.S. 400, 411, 108 S.Ct. 646, 98 L.Ed.2d 798 (1988); *Williams v. Florida*, 399 U.S. 78, 81-82, 90 S.Ct. 1893, 26 L.Ed.2d 446 (1970). There is no conceivable reason why he cannot similarly be compelled to exercise his Confrontation Clause rights before trial. See *Hinojos-Mendoza v. People*, 169 P.3d 662, 670 (Colo.2007) (discussing and approving Colorado's notice-and-demand provision). Today's decision will not disrupt criminal prosecutions in the many large States whose practice is already in accord with the Confrontation Clause.^{FN12}

FN12. As the dissent notes, *post*, at 2557, *some* state statutes, “requir[e] defense counsel to subpoena the analyst, to show good cause for demanding the analyst's presence, or even to affirm under oath an intent to cross-examine the analyst.” We have no occasion today to pass on the constitutionality of every variety of statute commonly given the notice-and-demand label. It suffices to say that what we have referred to as the “simplest form [of] notice-and-demand statutes,” *supra*, at 2541, is constitutional; that such provisions are in place in a number of States; and that in those States, and in other States that require confrontation

without notice-and-demand, there is no indication that the dire consequences predicted by the dissent have materialized.

*2542 Second, the dissent notes that several of the state-court cases that have already adopted this rule did so pursuant to our decision in *Crawford*, and not “independently ... as a matter of state law.” *Post*, at 2558. That may be so. But in assessing the likely practical effects of today's ruling, it is irrelevant *why* those courts adopted this rule; it matters only *that* they did so. It is true that many of these decisions are recent, but if the dissent's dire predictions were accurate, and given the large number of drug prosecutions at the state level, one would have expected immediate and dramatic results. The absence of such evidence is telling.

But it is not surprising. Defense attorneys and their clients will often stipulate to the nature of the substance in the ordinary drug case. It is unlikely that defense counsel will insist on live testimony whose effect will be merely to highlight rather than cast doubt upon the forensic analysis. Nor will defense attorneys want to antagonize the judge or jury by wasting their time with the appearance of a witness whose testimony defense counsel does not intend to rebut in any fashion.^{FN13} The *amicus* brief filed by District Attorneys in Support of the Commonwealth in the Massachusetts Supreme Court case upon which the Appeals Court here relied said that “it is almost always the case that [analysts' certificates] are admitted without objection. Generally, defendants do not object to the admission of drug certificates most likely because there is no benefit to a defendant from such testimony.” Brief for District Attorneys in Support of the Commonwealth in No. SJC-09320 (Mass.), p. 7 (footnote omitted). Given these strategic considerations, and in light of the experience in those States that already provide the same or similar protections to defendants, there is little reason to believe that our decision today will commence the parade of horrors respondent and the dissent predict.

FN13. Contrary to the dissent's suggestion, *post*, at 2555 - 2556, we do not cast aspersions on trial judges, who we trust will not be antagonized by good-faith requests for analysts' appearance at trial. Nor do we expect defense attorneys to refrain from zealous representation of their clients. We simply do not expect defense attorneys to believe that their clients' interests (or their own) are furthered by objections to analysts' reports whose conclusions counsel have no intention of challenging.

* * *

This case involves little more than the application of our holding in *Crawford v. Washington*, 541 U.S. 36, 124 S.Ct. 1354, 158 L.Ed.2d 177. The Sixth Amendment does not permit the prosecution to prove its case via *ex parte* out-of-court affidavits, and the admission of such evidence against Melendez-Diaz was error.^{FN14} We therefore reverse the judgment of the Appeals Court of Massachusetts and remand the case for further proceedings not inconsistent with this opinion.

FN14. We of course express no view as to whether the error was harmless. The Massachusetts Court of Appeals did not reach that question and we decline to address it in the first instance. Cf. *Coy v. Iowa*, 487 U.S. 1012, 1021-1022, 108 S.Ct. 2798, 101 L.Ed.2d 857 (1988). In connection with that determination, however, we disagree with the dissent's contention, *post*, at 2556, that “only an analyst's testimony suffices to prove [the] fact” that “the substance is cocaine.” Today's opinion, while insisting upon retention of the confrontation requirement, in no way alters the type of evidence (including circumstantial evidence) sufficient to sustain a conviction.

It is so ordered.

*2543 Justice THOMAS, concurring.

I write separately to note that I continue to adhere to my position that “the Confrontation Clause is implicated by extrajudicial statements only insofar as they are contained in formalized testimonial materials, such as affidavits, depositions, prior testimony, or confessions.” *White v. Illinois*, 502 U.S. 346, 365, 112 S.Ct. 736, 116 L.Ed.2d 848 (1992) (opinion concurring in part and concurring in judgment); see also *Giles v. California*, 554 U.S. ----, ----, 128 S.Ct. 2678, 2693, 171 L.Ed.2d 488 (2008) (concurring opinion) (characterizing statements within the scope of the Confrontation Clause to include those that are “sufficiently formal to resemble the Marian examinations” because they were Mirandized or custodial or “accompanied by [a] similar indicia of formality” (internal quotation marks

omitted)); *Davis v. Washington*, 547 U.S. 813, 836, 126 S.Ct. 2266, 165 L.Ed.2d 224 (2006) (opinion concurring in judgment in part and dissenting in part) (reiterating that the Clause encompasses extrajudicial statements contained in the types of formalized materials listed in *White, supra*, at 365, 112 S.Ct. 736. I join the Court's opinion in this case because the documents at issue in this case “are quite plainly affidavits,” *ante*, at 2532. As such, they “fall within the core class of testimonial statements” governed by the Confrontation Clause. *Ibid.* (internal quotation marks omitted).

Justice KENNEDY, with whom THE CHIEF JUSTICE, Justice BREYER, and Justice ALITO join, dissenting.

The Court sweeps away an accepted rule governing the admission of scientific evidence. Until today, scientific analysis could be introduced into evidence without testimony from the “analyst” who produced it. This rule has been established for at least 90 years. It extends across at least 35 States and six Federal Courts of Appeals. Yet the Court undoes it based on two recent opinions that say nothing about forensic analysts: *Crawford v. Washington*, 541 U.S. 36, 124 S.Ct. 1354, 158 L.Ed.2d 177 (2004), and *Davis v. Washington*, 547 U.S. 813, 126 S.Ct. 2266, 165 L.Ed.2d 224 (2006).

It is remarkable that the Court so confidently disregards a century of jurisprudence. We learn now that we have misinterpreted the Confrontation Clause—hardly an arcane or seldom-used provision of the Constitution—for the first 218 years of its existence. The immediate systemic concern is that the Court makes no attempt to acknowledge the real differences between laboratory analysts who perform scientific tests and other, more conventional witnesses—“witnesses” being the word the Framers used in the Confrontation Clause.

Crawford and *Davis* dealt with ordinary witnesses—women who had seen, and in two cases been the victim of, the crime in question. Those cases stand for the proposition that formal statements made by a conventional witness—one who has personal knowledge of some aspect of the defendant's guilt—may not be admitted without the witness appearing at trial to meet the accused face to face. But *Crawford* and *Davis* do not say—indeed, could not have said, because the facts were not before the Court—that anyone who makes a testimonial statement is a witness for purposes of the Confrontation Clause, even when that person has, in fact, witnessed nothing to give them personal knowledge of the defendant's guilt.

Because *Crawford* and *Davis* concerned typical witnesses, the Court should have done the sensible thing and limited its holding to witnesses as so defined. Indeed, as Justice THOMAS warned in his opinion in *Davis*, the Court's approach has *2544 become “disconnected from history and unnecessary to prevent abuse.” 547 U.S., at 838, 126 S.Ct. 2266. The Court's reliance on the word “testimonial” is of little help, of course, for that word does not appear in the text of the Clause.

The Court dictates to the States, as a matter of constitutional law, an as-yet-undefined set of rules governing what kinds of evidence may be admitted without in-court testimony. Indeed, under today's opinion the States bear an even more onerous burden than they did before *Crawford*. Then, the States at least had the guidance of the hearsay rule and could rest assured that “where the evidence [fell] within a firmly rooted hearsay exception,” the Confrontation Clause did not bar its admission. *Ohio v. Roberts*, 448 U.S. 56, 66, 100 S.Ct. 2531, 65 L.Ed.2d 597 (1980) (overruled by *Crawford*). Now, without guidance from any established body of law, the States can only guess what future rules this Court will distill from the sparse constitutional text. See, e.g., *Mendez, Crawford v. Washington : A Critique*, 57 Stan. L.Rev. 569, 586-593 (2004) (discussing unanswered questions regarding testimonial statements).

The Court's opinion suggests this will be a body of formalistic and wooden rules, divorced from precedent, common sense, and the underlying purpose of the Clause. Its ruling has vast potential to disrupt criminal procedures that already give ample protections against the misuse of scientific evidence. For these reasons, as more fully explained below, the Court's opinion elicits my respectful dissent.

I
A
1

The Court says that, before the results of a scientific test may be introduced into evidence, the defendant has the

right to confront the “analyst.” *Ante*, at 2531 - 2532. One must assume that this term, though it appears nowhere in the Confrontation Clause, nevertheless has some constitutional substance that now must be elaborated in future cases. There is no accepted definition of analyst, and there is no established precedent to define that term.

Consider how many people play a role in a routine test for the presence of illegal drugs. One person prepares a sample of the drug, places it in a testing machine, and retrieves the machine's printout-often, a graph showing the frequencies of radiation absorbed by the sample or the masses of the sample's molecular fragments. See 2 P. Giannelli & E. Imwinkelried, *Scientific Evidence* § 23.03 (4th ed.2007) (describing common methods of identifying drugs, including infrared spectrophotometry, nuclear magnetic resonance, gas chromatography, and mass spectrometry). A second person interprets the graph the machine prints out-perhaps by comparing that printout with published, standardized graphs of known drugs. *Ibid*. Meanwhile, a third person-perhaps an independent contractor-has calibrated the machine and, having done so, has certified that the machine is in good working order. Finally, a fourth person-perhaps the laboratory's director-certifies that his subordinates followed established procedures.

It is not at all evident which of these four persons is the analyst to be confronted under the rule the Court announces today. If all are witnesses who must appear for in-court confrontation, then the Court has, for all practical purposes, forbidden the use of scientific tests in criminal trials. As discussed further below, requiring even one of these individuals to testify threatens to disrupt if not end *2545 many prosecutions where guilt is clear but a newly found formalism now holds sway. See Part I-C, *infra*.

It is possible to read the Court's opinion, however, to say that all four must testify. Each one has contributed to the test's result and has, at least in some respects, made a representation about the test. Person One represents that a pure sample, properly drawn, entered the machine and produced a particular printout. Person Two represents that the printout corresponds to a known drug. Person Three represents that the machine was properly calibrated at the time. Person Four represents that all the others performed their jobs in accord with established procedures.

And each of the four has power to introduce error. A laboratory technician might adulterate the sample. The independent contractor might botch the machine's calibration. And so forth. The reasons for these errors may range from animus against the particular suspect or all criminal suspects to unintentional oversight; from gross negligence to good-faith mistake. It is no surprise that a plausible case can be made for deeming each person in the testing process an analyst under the Court's opinion.

Consider the independent contractor who has calibrated the testing machine. At least in a routine case, where the machine's result appears unmistakable, that result's accuracy depends entirely on the machine's calibration. The calibration, in turn, can be proved only by the contractor's certification that he or she did the job properly. That certification appears to be a testimonial statement under the Court's definition: It is a formal, out-of-court statement, offered for the truth of the matter asserted, and made for the purpose of later prosecution. See *ante*, at 2531 - 2532. It is not clear, under the Court's ruling, why the independent contractor is not also an analyst.

Consider the person who interprets the machine's printout. His or her interpretation may call for the exercise of professional judgment in close cases. See Giannelli & Imwinkelried, *supra*. If we assume no person deliberately introduces error, this interpretive step is the one most likely to permit human error to affect the test's result. This exercise of judgment might make this participant an analyst. The Court implies as much. See *ante*, at 2536 - 2537.

And we must yet consider the laboratory director who certifies the ultimate results. The director is arguably the most effective person to confront for revealing any ambiguity in findings, variations in procedures, or problems in the office, as he or she is most familiar with the standard procedures, the office's variations, and problems in prior cases or with particular analysts. The prosecution may seek to introduce his or her certification into evidence. The Court implies that only those statements that are actually entered into evidence require confrontation. See *ante*, at 2531 - 2532. This could mean that the director is also an analyst, even if his or her certification relies upon or restates work performed by subordinates.

The Court offers no principles or historical precedent to determine which of these persons is the analyst. All contribute to the test result. And each is equally remote from the scene, has no personal stake in the outcome, does

not even know the accused, and is concerned only with the performance of his or her role in conducting the test.

It could be argued that the only analyst who must testify is the person who signed the certificate. Under this view, a laboratory could have one employee sign certificates and appear in court, which would *2546 spare all the other analysts this burden. But the Court has already rejected this arrangement. The Court made clear in *Davis* that it will not permit the testimonial statement of one witness to enter into evidence through the in-court testimony of a second:

“[W]e do not think it conceivable that the protections of the Confrontation Clause can readily be evaded by having a note-taking policeman [here, the laboratory employee who signs the certificate] *recite* the unsworn hearsay testimony of the declarant [here, the analyst who performs the actual test], instead of having the declarant sign a deposition. Indeed, if there is one point for which no case-English or early American, state or federal-can be cited, that is it.” 547 U.S., at 826, 126 S.Ct. 2266.

Under this logic, the Court's holding cannot be cabined to the person who signs the certificates. If the signatory is restating the testimonial statements of the true analysts-whoever they might be-then those analysts, too, must testify in person.

Today's decision demonstrates that even in the narrow category of scientific tests that identify a drug, the Court cannot define with any clarity who the analyst is. Outside this narrow category, the range of other scientific tests that may be affected by the Court's new confrontation right is staggering. See, e.g., Comment, Toward a Definition of “Testimonial”: How Autopsy Reports Do Not Embody the Qualities of a Testimonial Statement, 96 Cal. L.Rev. 1093, 1094, 1115 (2008) (noting that every court post-*Crawford* has held that autopsy reports are not testimonial, and warning that a contrary rule would “effectively functio[n] as a statute of limitations for murder”).

2

It is difficult to confine at this point the damage the Court's holding will do in other contexts. Consider just two-establishing the chain of custody and authenticating a copy of a document.

It is the obligation of the prosecution to establish the chain of custody for evidence sent to testing laboratories-that is, to establish “the identity and integrity of physical evidence by tracing its continuous whereabouts.” 23 C.J.S., Criminal Law § 1142, p. 66 (2008). Meeting this obligation requires representations-that one officer retrieved the evidence from the crime scene, that a second officer checked it into an evidence locker, that a third officer verified the locker's seal was intact, and so forth. The iron logic of which the Court is so enamored would seem to require in-court testimony from each human link in the chain of custody. That, of course, has never been the law. See, e.g., *United States v. Lott*, 854 F.2d 244, 250 (C.A.7 1988) (“[G]aps in the chain [of custody] normally go to the weight of the evidence rather than its admissibility”); 29A Am.Jur.2d, Evidence § 962, p. 269 (2009) (“The fact that one of the persons in control of a fungible substance does not testify at trial does not, without more, make the substance or testimony relating to it inadmissible”); C.J.S., *supra*, § 1142, at 67 (“It is generally not necessary that every witness who handled the evidence testify”).

It is no answer for the Court to say that “[i]t is up to the prosecution to decide what steps in the chain of custody are so crucial as to require evidence.” *Ante*, at 2532, n. 1. The case itself determines which links in the chain are crucial-not the prosecution. In any number of cases, the crucial link in the chain will not be available to testify and so the evidence will be excluded for lack of a proper foundation.

Consider another context in which the Court's holding may cause disruption: The *2547 long-accepted practice of authenticating copies of documents by means of a certificate from the document's custodian stating that the copy is accurate. See, e.g., Fed. Rule Evid. 902(4) (in order to be self-authenticating, a copy of a public record must be “certified as correct by the custodian”); Rule 902(11) (business record must be “accompanied by a written declaration of its custodian”). Under one possible reading of the Court's opinion, recordkeepers will be required to testify. So far, courts have not read *Crawford* and *Davis* to impose this largely meaningless requirement. See, e.g., *United States v. Adefehinti*, 510 F.3d 319, 327-328 (C.A.D.C.2008) (certificates authenticating bank records may be admitted without confrontation); *United States v. Ellis*, 460 F.3d 920, 927 (C.A.7 2006) (certificate authenticating

hospital records). But the breadth of the Court's ruling today, and its undefined scope, may well be such that these courts now must be deemed to have erred. The risk of that consequence ought to tell us that something is very wrong with the Court's analysis.

Because the Court is driven by nothing more than a wooden application of the *Crawford* and *Davis* definition of “testimonial,” divorced from any guidance from history, precedent, or common sense, there is no way to predict the future applications of today's holding. Surely part of the justification for the Court's formalism must lie in its predictability. There is nothing predictable here, however, other than the uncertainty and disruption that now must ensue.

B

With no precedent to guide us, let us assume that the Court's analyst is the person who interprets the machine's printout. This result makes no sense. The Confrontation Clause is not designed, and does not serve, to detect errors in scientific tests. That should instead be done by conducting a new test. Or, if a new test is impossible, the defendant may call his own expert to explain to the jury the test's flaws and the dangers of relying on it. And if, in an extraordinary case, the particular analyst's testimony is necessary to the defense, then, of course, the defendant may subpoena the analyst. The Court frets that the defendant may be unable to do so “when the [analyst] is unavailable or simply refuses to appear.” *Ante*, at 2540. But laboratory analysts are not difficult to locate or to compel. As discussed below, analysts already devote considerable time to appearing in court when subpoenaed to do so. See Part I-C, *infra*; see also Brief for State of Alabama et al. as *Amici Curiae* 26-28. Neither the Court, petitioner, nor *amici* offer any reason to believe that defendants have trouble subpoenaing analysts in cases where the analysts' in-court testimony is necessary.

The facts of this case illustrate the formalistic and pointless nature of the Court's reading of the Clause. Petitioner knew, well in advance of trial, that the Commonwealth would introduce the tests against him. The bags of cocaine were in court, available for him to test, and entered into evidence. Yet petitioner made no effort, before or during trial, to mount a defense against the analysts' results. Petitioner could have challenged the tests' reliability by seeking discovery concerning the testing methods used or the qualifications of the laboratory analysts. See Mass. Rule Crim. Proc. 14(a)(2) (2009). He did not do so. Petitioner could have sought to conduct his own test. See Rule 41. Again, he did not seek a test; indeed, he did not argue that the drug was not cocaine. Rather than dispute the authenticity of the samples tested or the accuracy of the tests performed, petitioner argued to the jury *2548 that the prosecution had not shown that he had possessed or dealt in the drugs.

Despite not having prepared a defense to the analysts' results, petitioner's counsel made what can only be described as a *pro forma* objection to admitting the results without in-court testimony, presumably from one particular analyst. Today the Court, by deciding that this objection should have been sustained, transforms the Confrontation Clause from a sensible procedural protection into a distortion of the criminal justice system.

It is difficult to perceive how the Court's holding will advance the purposes of the Confrontation Clause. One purpose of confrontation is to impress upon witnesses the gravity of their conduct. See *Coy v. Iowa*, 487 U.S. 1012, 1019-1020, 108 S.Ct. 2798, 101 L.Ed.2d 857 (1988). A witness, when brought to face the person his or her words condemn, might refine, reformulate, reconsider, or even recant earlier statements. See *ibid*. A further purpose is to alleviate the danger of one-sided interrogations by adversarial government officials who might distort a witness's testimony. The Clause guards against this danger by bringing the interrogation into the more neutral and public forum of the courtroom. See *Maryland v. Craig*, 497 U.S. 836, 869-870, 110 S.Ct. 3157, 111 L.Ed.2d 666 (1990) (SCALIA, J., dissenting) (discussing the “value of the confrontation right in guarding against a child's distorted or coerced recollections”); see also 96 Cal. L.Rev., *supra*, at 1120-1122 (“During private law-enforcement questioning, police officers or prosecutors can exert pressure on the witness without a high risk of being discovered. Courtroom questioning, in contrast, is public and performed in front of the jury, judge and defendant. Pressure is therefore harder to exert in court”).

But neither purpose is served by the rule the Court announces today. It is not plausible that a laboratory analyst will retract his or her prior conclusion upon catching sight of the defendant the result condemns. After all, the analyst is far removed from the particular defendant and, indeed, claims no personal knowledge of the defendant's guilt. And an analyst performs hundreds if not thousands of tests each year and will not remember a particular test or

the link it had to the defendant.

This is not to say that analysts are infallible. They are not. It may well be that if the State does not introduce the machine printout or the raw results of a laboratory analysis; if it does not call an expert to interpret a test, particularly if that test is complex or little known; if it does not establish the chain of custody and the reliability of the laboratory; then the State will have failed to meet its burden of proof. That result follows because the State must prove its case beyond a reasonable doubt, without relying on presumptions, unreliable hearsay, and the like. See *United States v. United States Gypsum Co.*, 438 U.S. 422, 446, 98 S.Ct. 2864, 57 L.Ed.2d 854 (1978) (refusing to permit a “ ‘conclusive presumption [of intent],’ ” which “ ‘would effectively eliminate intent as an ingredient of the offense’ ” (quoting *Morissette v. United States*, 342 U.S. 246, 274-275, 72 S.Ct. 240, 96 L.Ed. 288 (1952)). The State must permit the defendant to challenge the analyst's result. See *Holmes v. South Carolina*, 547 U.S. 319, 331, 126 S.Ct. 1727, 164 L.Ed.2d 503 (2006) (affirming the defendant's right to “have a meaningful opportunity to present a complete defense” (internal quotation marks omitted)). The rules of evidence, including those governing reliability under hearsay principles and the latitude to be given expert witnesses; the rules against irrebuttable presumptions; and the overriding principle that the prosecution must make *2549 its case beyond a reasonable doubt—all these are part of the protections for the accused. The States, however, have some latitude in determining how these rules should be defined.

The Confrontation Clause addresses who must testify. It simply does not follow, however, that this clause, in lieu of the other rules set forth above, controls who the prosecution must call on every issue. Suppose, for instance, that the defense challenges the procedures for a secure chain of custody for evidence sent to a lab and then returned to the police. The defense has the right to call its own witnesses to show that the chain of custody is not secure. But that does not mean it can demand that, in the prosecution's case in chief, each person who is in the chain of custody—and who had an undoubted opportunity to taint or tamper with the evidence—must be called by the prosecution under the Confrontation Clause. And the same is true with lab technicians.

The Confrontation Clause is simply not needed for these matters. Where, as here, the defendant does not even dispute the accuracy of the analyst's work, confrontation adds nothing.

C

For the sake of these negligible benefits, the Court threatens to disrupt forensic investigations across the country and to put prosecutions nationwide at risk of dismissal based on erratic, all-too-frequent instances when a particular laboratory technician, now invested by the Court's new constitutional designation as the analyst, simply does not or cannot appear.

Consider first the costs today's decision imposes on criminal trials. Our own Court enjoys weeks, often months, of notice before cases are argued. We receive briefs well in advance. The argument itself is ordered. A busy trial court, by contrast, must consider not only attorneys' schedules but also those of witnesses and juries. Trial courts have huge caseloads to be processed within strict time limits. Some cases may unexpectedly plead out at the last minute; others, just as unexpectedly, may not. Some juries stay out longer than predicted; others must be reconstituted. An analyst cannot hope to be the trial court's top priority in scheduling. The analyst must instead face the prospect of waiting for days in a hallway outside the courtroom before being called to offer testimony that will consist of little more than a rote recital of the written report. See Part I-B, *supra*.

As matters stood before today's opinion, analysts already spent considerable time appearing as witnesses in those few cases where the defendant, unlike petitioner in this case, contested the analyst's result and subpoenaed the analyst. See Brief for Alabama et al. as *Amici Curiae* 26-28 (testifying takes time); *ante*, at 2542 (before today's opinion, it was “ ‘almost always the case that analysts' certificates [we]re admitted without objection’ ” in Massachusetts courts). By requiring analysts also to appear in the far greater number of cases where defendants do not dispute the analyst's result, the Court imposes enormous costs on the administration of justice.

Setting aside, for a moment, all the other crimes for which scientific evidence is required, consider the costs the Court's ruling will impose on state drug prosecutions alone. In 2004, the most recent year for which data are available, drug possession and trafficking resulted in 362,850 felony convictions in state courts across the country.

See Dept. of Justice, Bureau of Justice Statistics, M. Durose & P. Langan, *Felony Sentences in State Courts 2004*, p. 2 (July 2007). Roughly 95% of those convictions were products of plea *2550 bargains, see *id.*, at 1, which means that state courts saw more than 18,000 drug trials in a single year.

The analysts responsible for testing the drugs at issue in those cases now bear a crushing burden. For example, the district attorney in Philadelphia prosecuted 25,000 drug crimes in 2007. Brief for National Dist. Attorneys Association et al. as *Amici Curiae* 12-13. Assuming that number remains the same, and assuming that 95% of the cases end in a plea bargain, each of the city's 18 drug analysts, *ibid.*, will be required to testify in more than 69 trials next year. Cleveland's district attorney prosecuted 14,000 drug crimes in 2007. *Ibid.* Assuming that number holds, and that 95% of the cases end in a plea bargain, each of the city's 6 drug analysts (two of whom work only part time) must testify in 117 drug cases next year. *Id.*, at 13.

The Federal Government may face even graver difficulties than the States because its operations are so widespread. For example, the FBI laboratory at Quantico, Virginia, supports federal, state, and local investigations across the country. Its 500 employees conduct over one million scientific tests each year. Dept. of Justice, FBI Laboratory 2007, Message from the FBI Laboratory Director, <http://www.fbi.gov/hq/lab/lab2007/labannual07.pdf> (as visited June 22, 2009, and available in Clerk of Court's case file). The Court's decision means that before any of those million tests reaches a jury, at least one of the laboratory's analysts must board a plane, find his or her way to an unfamiliar courthouse, and sit there waiting to read aloud notes made months ago.

The Court purchases its meddling with the Confrontation Clause at a dear price, a price not measured in taxpayer dollars alone. Guilty defendants will go free, on the most technical grounds, as a direct result of today's decision, adding nothing to the truth-finding process. The analyst will not always make it to the courthouse in time. He or she may be ill; may be out of the country; may be unable to travel because of inclement weather; or may at that very moment be waiting outside some other courtroom for another defendant to exercise the right the Court invents today. If for any reason the analyst cannot make it to the courthouse in time, then, the Court holds, the jury cannot learn of the analyst's findings (unless, by some unlikely turn of events, the defendant previously cross-examined the analyst). *Ante*, at 2531. The result, in many cases, will be that the prosecution cannot meet its burden of proof, and the guilty defendant goes free on a technicality that, because it results in an acquittal, cannot be reviewed on appeal.

The Court's holding is a windfall to defendants, one that is unjustified by any demonstrated deficiency in trials, any well-understood historical requirement, or any established constitutional precedent.

II

All of the problems with today's decision—the imprecise definition of “analyst,” the lack of any perceptible benefit, the heavy societal costs—would be of no moment if the Constitution did, in fact, require the Court to rule as it does today. But the Constitution does not.

The Court's fundamental mistake is to read the Confrontation Clause as referring to a kind of out-of-court statement—namely, a testimonial statement—that must be excluded from evidence. The Clause does not refer to kinds of statements. Nor does the Clause contain the word “testimonial.” The text, instead, refers to kinds of persons, namely, to “witnesses against” the defendant. Laboratory analysts are not “witnesses against” the defendant as those *2551 words would have been understood at the framing. There is simply no authority for this proposition.

Instead, the Clause refers to a conventional “witness”—meaning one who witnesses (that is, perceives) an event that gives him or her personal knowledge of some aspect of the defendant's guilt. Both *Crawford* and *Davis* concerned just this kind of ordinary witness—and nothing in the Confrontation Clause's text, history, or precedent justifies the Court's decision to expand those cases.

A

The Clause states: “In all criminal prosecutions, the accused shall enjoy the right ... to be confronted with the witnesses against him.” U.S. Const., Amdt. 6. Though there is “virtually no evidence of what the drafters of the Confrontation Clause intended it to mean,” *White v. Illinois*, 502 U.S. 346, 359, 112 S.Ct. 736, 116 L.Ed.2d 848

(1992) (THOMAS, J., concurring in part and concurring in judgment), it is certain the Framers did not contemplate that an analyst who conducts a scientific test far removed from the crime would be considered a “witness against” the defendant.

The Framers were concerned with a typical witness—one who perceived an event that gave rise to a personal belief in some aspect of the defendant's guilt. There is no evidence that the Framers understood the Clause to extend to unconventional witnesses. As discussed below, there is significant evidence to the contrary. See Part II-B, *infra*. In these circumstances, the historical evidence in support of the Court's position is “‘too meager ... to form a solid basis in history, preceding and contemporaneous with the framing of the Constitution.’” *Boumediene v. Bush*, 553 U.S. 723, ----, 128 S.Ct. 2229, 2251, 171 L.Ed.2d 41 (2008) (quoting *Reid v. Covert*, 354 U.S. 1, 64, 77 S.Ct. 1222, 1 L.Ed.2d 1148 (1957) (Frankfurter, J., concurring in result)). The Court goes dangerously wrong when it bases its constitutional interpretation upon historical guesswork.

The infamous treason trial of Sir Walter Raleigh provides excellent examples of the kinds of witnesses to whom the Confrontation Clause refers. *Raleigh's Case*, 2 How. St. Tr. 1 (1603); see *Crawford*, 541 U.S., at 44-45, 124 S.Ct. 1354 (Raleigh's trial informs our understanding of the Clause because it was, at the time of the framing, one of the “most notorious instances” of the abuse of witnesses' out-of-court statements); *ante*, at 2534 (same). Raleigh's accusers claimed to have heard Raleigh speak treason, so they were witnesses in the conventional sense. We should limit the Confrontation Clause to witnesses like those in Raleigh's trial.

The Court today expands the Clause to include laboratory analysts, but analysts differ from ordinary witnesses in at least three significant ways. First, a conventional witness recalls events observed in the past, while an analyst's report contains near-contemporaneous observations of the test. An observation recorded at the time it is made is unlike the usual act of testifying. A typical witness must recall a previous event that he or she perceived just once, and thus may have misperceived or misremembered. But an analyst making a contemporaneous observation need not rely on memory; he or she instead reports the observations at the time they are made. We gave this consideration substantial weight in *Davis*. There, the “primary purpose” of the victim's 911 call was “to enable police assistance to meet an ongoing emergency,” rather than “to establish or prove past events potentially relevant to later criminal prosecution.” 547 U.S., at 822, 827, 126 S.Ct. 2266. See *2552 also *People v. Geier*, 41 Cal.4th 555, 605-609, 61 Cal.Rptr.3d 580, 161 P.3d 104, 139-141 (2007). The Court cites no authority for its holding that an observation recorded at the time it is made is an act of “witness[ing]” for purposes of the Confrontation Clause.

Second, an analyst observes neither the crime nor any human action related to it. Often, the analyst does not know the defendant's identity, much less have personal knowledge of an aspect of the defendant's guilt. The analyst's distance from the crime and the defendant, in both space and time, suggests the analyst is not a witness against the defendant in the conventional sense.

Third, a conventional witness responds to questions under interrogation. See, e.g., *Raleigh's Case*, *supra*, at 15-20. But laboratory tests are conducted according to scientific protocols; they are not dependent upon or controlled by interrogation of any sort. Put differently, out-of-court statements should only “require confrontation if they are produced by, or with the involvement of, adversarial government officials responsible for investigating and prosecuting crime.” 96 Cal. L.Rev., at 1118. There is no indication that the analysts here—who work for the State Laboratory Institute, a division of the Massachusetts Department of Public Health—were adversarial to petitioner. Nor is there any evidence that adversarial officials played a role in formulating the analysts' certificates.

Rather than acknowledge that it expands the Confrontation Clause beyond conventional witnesses, the Court relies on our recent opinions in *Crawford* and *Davis*. *Ante*, at 2531 - 2532. The Court assumes, with little analysis, that *Crawford* and *Davis* extended the Clause to any person who makes a “testimonial” statement. But the Court's confident tone cannot disguise the thinness of these two reeds. Neither *Crawford* nor *Davis* considered whether the Clause extends to persons far removed from the crime who have no connection to the defendant. Instead, those cases concerned conventional witnesses. *Davis*, *supra*, at 826-830, 126 S.Ct. 2266 (witnesses were victims of defendants' assaults); *Crawford*, *supra*, at 38, 124 S.Ct. 1354 (witness saw defendant stab victim).

It is true that *Crawford* and *Davis* employed the term “testimonial,” and thereby suggested that any testimonial

statement, by any person, no matter how distant from the defendant and the crime, is subject to the Confrontation Clause. But that suggestion was not part of the holding of *Crawford* or *Davis*. Those opinions used the adjective “testimonial” to avoid the awkward phrasing required by reusing the noun “witness.” The Court today transforms that turn of phrase into a new and sweeping legal rule, by holding that anyone who makes a formal statement for the purpose of later prosecution—no matter how removed from the crime—must be considered a “witness against” the defendant. *Ante*, at 2531 - 2532. The Court cites no authority to justify this expansive new interpretation.

B

No historical evidence supports the Court's conclusion that the Confrontation Clause was understood to extend beyond conventional witnesses to include analysts who conduct scientific tests far removed from the crime and the defendant. Indeed, what little evidence there is contradicts this interpretation.

Though the Framers had no forensic scientists, they did use another kind of unconventional witness—the copyist. A copyist's work may be as essential to a criminal prosecution as the forensic analyst's. *2553 To convict a man of bigamy, for example, the State often requires his marriage records. See, e.g., *Williams v. State*, 54 Ala. 131, 134, 135 (1875); *State v. Potter*, 52 Vt. 33, 38 (1879). But if the original records cannot be taken from the archive, the prosecution must rely on copies of those records, made for the purpose of introducing the copies into evidence at trial. See *ibid*. In that case, the copyist's honesty and diligence are just as important as the analyst's here. If the copyist falsifies a copy, or even misspells a name or transposes a date, those flaws could lead the jury to convict. Because so much depends on his or her honesty and diligence, the copyist often prepares an affidavit certifying that the copy is true and accurate.

Such a certificate is beyond question a testimonial statement under the Court's definition: It is a formal out-of-court statement offered for the truth of two matters (the copyist's honesty and the copy's accuracy), and it is prepared for a criminal prosecution.

During the Framers' era copyists' affidavits were accepted without hesitation by American courts. See, e.g., *United States v. Percheman*, 7 Pet. 51, 85, 8 L.Ed. 604 (1833) (opinion for the Court by Marshall, C. J.); see also Advisory Committee's Note on Fed. Rule Evid. 902(4), 28 U.S.C.App., p. 390 (“The common law ... recognized the procedure of authenticating copies of public records by certificate”); 5 J. Wigmore, *Evidence* §§ 1677, 1678 (J. Chadbourne rev.1974). And courts admitted copyists' affidavits in criminal as well as civil trials. See *Williams*, *supra*; *Potter*, *supra*. This demonstrates that the framing generation, in contrast to the Court today, did not consider the Confrontation Clause to require in-court confrontation of unconventional authors of testimonial statements.

The Court attempts to explain away this historical exception to its rule by noting that a copyist's authority is “narrowly circumscribed.” *Ante*, at 2539. But the Court does not explain why that matters, nor, if it does matter, why laboratory analysts' authority should not also be deemed “narrowly circumscribed” so that they, too, may be excused from testifying. And drawing these fine distinctions cannot be squared with the Court's avowed allegiance to formalism. Determining whether a witness' authority is “narrowly circumscribed” has nothing to do with *Crawford*'s testimonial framework. It instead appears much closer to the pre-*Crawford* rule of *Ohio v. Roberts*, under which a statement could be admitted without testimony if it “bears adequate indicia of reliability.” 448 U.S., at 66, 100 S.Ct. 2531 (internal quotation marks omitted).

In keeping with the traditional understanding of the Confrontation Clause, this Court in *Dowdell v. United States*, 221 U.S. 325, 31 S.Ct. 590, 55 L.Ed. 753 (1911), rejected a challenge to the use of certificates, sworn out by a clerk of court, a trial judge, and a court reporter, stating that defendants had been present at trial. Those certificates, like a copyist's certificate, met every requirement of the Court's current definition of “testimonial.” In rejecting the defendants' claim that use of the certificates violated the Confrontation Clause, the Court in *Dowdell* explained that the officials who executed the certificates “were not witnesses against the accused” because they “were not asked to testify to facts concerning [the defendants'] guilt or innocence.” *Id.*, at 330, 31 S.Ct. 590. Indeed, as recently as *Davis*, the Court reaffirmed *Dowdell*. 547 U.S., at 825, 126 S.Ct. 2266.

By insisting that every author of a testimonial statement appear for confrontation, *2554 on pain of excluding the statement from evidence, the Court does violence to the Framers' sensible, and limited, conception of the right to

confront “witnesses against” the defendant.

C

In addition to lacking support in historical practice or in this Court's precedent, the Court's decision is also contrary to authority extending over at least 90 years, 35 States, and six Federal Courts of Appeals.

Almost 100 years ago three state supreme courts held that their state constitutions did not require analysts to testify in court. In a case much like this one, the Massachusetts Supreme Judicial Court upheld the admission of a certificate stating that the liquid seized from the defendant contained alcohol, even though the author of the certificate did not testify. *Commonwealth v. Slavski*, 245 Mass. 405, 413, 140 N.E. 465, 467 (1923). The highest courts in Connecticut and Virginia reached similar conclusions under their own constitutions. *State v. Torello*, 103 Conn. 511, 131 A. 429 (1925); *Bracey v. Commonwealth*, 119 Va. 867, 89 S.E. 144 (1916). Just two state courts appear to have read a state constitution to require a contrary result. *State v. Clark*, 290 Mont. 479, 484-489, 964 P.2d 766, 770-772 (1998) (laboratory drug report requires confrontation under Montana's Constitution, which is “[u]nlike its federal counterpart”); *State v. Birchfield*, 342 Or. 624, 157 P.3d 216 (2007), but see *id.*, at 631-632, 157 P.3d, at 220 (suggesting that a “typical notice requirement” would be lawful).

As for the Federal Constitution, before *Crawford* the authority was stronger still: The Sixth Amendment does not require analysts to testify in court. All Federal Courts of Appeals to consider the issue agreed. *Sherman v. Scott*, 62 F.3d 136, 139-142 (C.A.5 1995); *Minner v. Kerby*, 30 F.3d 1311, 1313-1315 (C.A.10 1994); *United States v. Baker*, 855 F.2d 1353, 1359-1360 (C.A.8 1988); *Reardon v. Manson*, 806 F.2d 39 (C.A.2 1986); *Kay v. United States*, 255 F.2d 476, 480-481 (C.A.4 1958); see also *Manocchio v. Moran*, 919 F.2d 770, 777-782 (C.A.1 1990) (autopsy report stating cause of victim's death). Some 24 state courts, and the Court of Appeals for the Armed Forces, were in accord. See Appendix A, *infra*. (Some cases cited in the appendixes concern doctors, coroners, and calibrators rather than laboratory analysts, but their reasoning is much the same.) Eleven more state courts upheld burden-shifting statutes that reduce, if not eliminate, the right to confrontation by requiring the defendant to take affirmative steps prior to trial to summon the analyst. See *ibid*. Because these burden-shifting statutes may be invalidated by the Court's reasoning, these 11 decisions, too, appear contrary to today's opinion. See Part III-B, *infra*. Most of the remaining States, far from endorsing the Court's view, appear not to have addressed the question prior to *Crawford*. Against this weight of authority, the Court proffers just two cases from intermediate state courts of appeals. *Ante*, at 2533 - 2534.

On a practical level, today's ruling would cause less disruption if the States' hearsay rules had already required analysts to testify. But few States require this. At least sixteen state courts have held that their evidentiary rules permit scientific test results, calibration certificates, and the observations of medical personnel to enter evidence without in-court testimony. See Appendix B, *infra*. The Federal Courts of Appeals have reached the same conclusion in applying the federal hearsay rule. *United States v. Garnett*, 122 F.3d 1016, 1018-1019 (C.A.11 1997) (*per curiam*); *United States v. Gilbert*, 774 F.2d 962, 965 *2555 (C.A.9 1985) (*per curiam*); *United States v. Ware*, 247 F.2d 698, 699-700 (C.A.7 1957); but see *United States v. Oates*, 560 F.2d 45, 82 (C.A.2 1977) (report prepared by law enforcement not admissible under public-records or business-records exceptions to federal hearsay rule).

The modern trend in the state courts has been away from the Court's rule and toward the admission of scientific test results without testimony—perhaps because the States have recognized the increasing reliability of scientific testing. See Appendix B, *infra* (citing cases from three States overruling or limiting previous precedents that had adopted the Court's rule as a matter of state law). It appears that a mere six courts continue to interpret their States' hearsay laws to require analysts to testify. See *ibid*. And, of course, where courts have grounded their decisions in state law, rather than the Constitution, the legislatures in those States have had, until now, the power to abrogate the courts' interpretation if the costs were shown to outweigh the benefits. Today the Court strips that authority from the States by carving the minority view into the constitutional text.

State legislatures, and not the Members of this Court, have the authority to shape the rules of evidence. The Court therefore errs when it relies in such great measure on the recent report of the National Academy of Sciences. *Ante*, at 2536 - 2537 (discussing National Research Council of the National Academies, *Strengthening Forensic Science in the United States: A Path Forward* (Prepublication Copy Feb. 2009)). That report is not directed to this Court, but rather to the elected representatives in Congress and the state legislatures, who, unlike Members of this

Court, have the power and competence to determine whether scientific tests are unreliable and, if so, whether testimony is the proper solution to the problem.

The Court rejects the well-established understanding-extending across at least 90 years, 35 States and six Federal Courts of Appeals-that the Constitution does not require analysts to testify in court before their analysis may be introduced into evidence. The only authority on which the Court can rely is its own speculation on the meaning of the word “testimonial,” made in two recent opinions that said nothing about scientific analysis or scientific analysts.

III

In an attempt to show that the “sky will not fall after today's decision,” *ante*, at 2540, the Court makes three arguments, none of which withstands scrutiny.

A

In an unconvincing effort to play down the threat that today's new rule will disrupt or even end criminal prosecutions, the Court professes a hope that defense counsel will decline to raise what will soon be known as the *Melendez-Diaz* objection. *Ante*, at 2542. The Court bases this expectation on its understanding that defense attorneys surrender constitutional rights because the attorneys do not “want to antagonize the judge or jury by wasting their time.” *Ibid*.

The Court's reasoning is troubling on at least two levels. First, the Court's speculation rests on the apparent belief that our Nation's trial judges and jurors are unwilling to accept zealous advocacy and that, once “antagonize[d]” by it, will punish such advocates with adverse rulings. *Ibid*. The Court offers no support for this stunning slur on the integrity of the Nation's courts. It is commonplace for the defense to request, at the conclusion of the prosecution's opening case, a directed verdict of *2556 acquittal. If the prosecution has failed to prove an element of the crime-even an element that is technical and rather obvious, such as movement of a car in interstate commerce-then the case must be dismissed. Until today one would not have thought that judges should be angered at the defense for making such motions, nor that counsel has some sort of obligation to avoid being troublesome when the prosecution has not done all the law requires to prove its case.

Second, even if the Court were right to expect trial judges to feel “antagonize[d]” by *Melendez-Diaz* objections and to then vent their anger by punishing the lawyer in some way, there is no authority to support the Court's suggestion that a lawyer may shirk his or her professional duties just to avoid judicial displeasure. There is good reason why the Court cites no authority for this suggestion-it is contrary to what some of us, at least, have long understood to be defense counsel's duty to be a zealous advocate for every client. This Court has recognized the bedrock principle that a competent criminal defense lawyer must put the prosecution to its proof:

“[T]he adversarial process protected by the Sixth Amendment requires that the accused have ‘counsel acting in the role of an advocate.’ *Anders v. California*, 386 U.S. 738, 743, 87 S.Ct. 1396, 18 L.Ed.2d 493 (1967). The right to the effective assistance of counsel is thus the right of the accused to require the prosecution's case to survive the crucible of meaningful adversarial testing. When a true adversarial criminal trial has been conducted ... the kind of testing envisioned by the Sixth Amendment has occurred. But if the process loses its character as a confrontation between adversaries, the constitutional guarantee is violated.” *United States v. Cronin*, 466 U.S. 648, 656-657, 104 S.Ct. 2039, 80 L.Ed.2d 657 (1984) (footnotes omitted).

See also ABA Model Code of Professional Responsibility, Canon 7-1, in ABA Compendium of Professional Responsibility Rules and Standards (2008) (“The duty of a lawyer, both to his client and to the legal system, is to represent his client zealously within the bounds of the law ...” (footnotes omitted)).

The instant case demonstrates how zealous defense counsel will defend their clients. To convict, the prosecution must prove the substance is cocaine. Under the Court's new rule, apparently only an analyst's testimony suffices to prove that fact. (Of course there will also be a large universe of other crimes, ranging from homicide to robbery, where scientific evidence is necessary to prove an element.) In cases where scientific evidence is necessary to prove an element of the crime, the Court's rule requires the prosecution to call the person identified as the analyst; this requirement has become a new prosecutorial duty linked with proving the State's case beyond a reasonable doubt.

Unless the Court is ashamed of its new rule, it is inexplicable that the Court seeks to limit its damage by hoping that defense counsel will be derelict in their duty to insist that the prosecution prove its case. That is simply not the way the adversarial system works.

In any event, the Court's hope is sure to prove unfounded. The Court surmises that “[i]t is unlikely that defense counsel will insist on live testimony whose effect will be merely to highlight rather than cast doubt upon the forensic analysis.” *Ante*, at 2542. This optimistic prediction misunderstands how criminal trials work. If the defense does not plan to challenge the test result, “highlight[ing]” that result through testimony does not harm the defense as the Court supposes. If the analyst cannot *2557 reach the courtroom in time to testify, however, a *Melendez-Diaz* objection grants the defense a great windfall: The analyst's work cannot come into evidence. Given the prospect of such a windfall (which may, in and of itself, secure an acquittal) few zealous advocates will pledge, prior to trial, not to raise a *Melendez-Diaz* objection. Defense counsel will accept the risk that the jury may hear the analyst's live testimony, in exchange for the chance that the analyst fails to appear and the government's case collapses. And if, as here, the defense is not that the substance was harmless, but instead that the accused did not possess it, the testimony of the technician is a formalism that does not detract from the defense case.

In further support of its unlikely hope, the Court relies on the Brief for Law Professors as *Amici Curiae* 7-8, which reports that nearly 95% of convictions are obtained via guilty plea and thus do not require in-court testimony from laboratory analysts. *Ante*, at 2540. What the Court does not consider is how its holding will alter these statistics. The defense bar today gains the formidable power to require the government to transport the analyst to the courtroom at the time of trial. Zealous counsel will insist upon concessions: a plea bargain, or a more lenient sentence in exchange for relinquishing this remarkable power.

B

As further reassurance that the “sky will not fall after today's decision,” *ante*, at 2540, the Court notes that many States have enacted burden-shifting statutes that require the defendant to assert his Confrontation Clause right prior to trial or else “forfeit” it “by silence.” *Ibid.* The Court implies that by shifting the burden to the defendant to take affirmative steps to produce the analyst, these statutes reduce the burden on the prosecution.

The Court holds that these burden-shifting statutes are valid because, in the Court's view, they “shift no burden whatever.” *Ante*, at 2541. While this conclusion is welcome, the premise appears flawed. Even what the Court calls the “simplest form” of burden-shifting statutes do impose requirements on the defendant, who must make a formal demand, with proper service, well before trial. Some statutes impose more requirements, for instance by requiring defense counsel to subpoena the analyst, to show good cause for demanding the analyst's presence, or even to affirm under oath an intent to cross-examine the analyst. See generally Metzger, Cheating the Constitution, 59 Vand. L.Rev. 475, 481-485 (2006). In a future case, the Court may find that some of these more onerous burden-shifting statutes violate the Confrontation Clause because they “impos[e] a burden ... on the defendant to bring ... adverse witnesses into court.” *Ante*, at 2540.

The burden-shifting statutes thus provide little reassurance that this case will not impose a meaningless formalism across the board.

C

In a further effort to support its assessment that today's decision will not cause disruption, the Court cites 10 decisions from States that, the Court asserts, “have already adopted the constitutional rule we announce today.” *Ante*, at 2540, and n. 11. The Court assures us that “there is no evidence that the criminal justice system has ground to a halt in the[se] States.” *Ante*, at 2540.

On inspection, the citations prove far less reassuring than promised. Seven were decided by courts that considered themselves bound by *Crawford*. These *2558 cases thus offer no support for the Court's assertion that the state jurists independently “adopted” the Court's interpretation as a matter of state law. Quite the contrary, the debate in those seven courts was over just how far this Court intended *Crawford* to sweep. See, e.g., *State v. Belvin*, 986 So.2d 516, 526 (Fla.2008) (Wells, J., concurring in part and dissenting in part) (“I believe that the majority has extended the *Crawford* and *Davis* decisions beyond their intended reach” (citations omitted)). The Court should

correct these courts' overbroad reading of *Crawford*, not endorse it. Were the Court to do so, these seven jurisdictions might well change their position.

Moreover, because these seven courts only “adopted” the Court's position in the wake of *Crawford*, their decisions are all quite recent. These States have not yet been subject to the widespread, adverse results of the formalism the Court mandates today.

The citations also fail to reassure for a different reason. Five of the Court's 10 citations—including all 3 pre-*Crawford* cases—come from States that have reduced the confrontation right. Four States have enacted a burden-shifting statute requiring the defendant to give early notice of his intent to confront the analyst. See Part III-B, *supra*; Colorado: *Hinojos-Mendoza v. People*, 169 P.3d 662, 668-671 (Colo.2007), Colo.Rev.Stat. § 16-3-309 (2008) (defendant must give notice 10 days before trial); Georgia: Compare *Miller v. State*, 266 Ga. 850, 854-855, 472 S.E.2d 74, 78-79 (1996) (striking down earlier notice statute requiring defendant to show good cause, prior to trial, to call the analyst), with Ga.Code Ann. § 35-3-154.1 (2006) (defendant must give notice 10 days before trial); Illinois: *People v. McClanahan*, 191 Ill.2d 127, 133-134, 246 Ill.Dec. 97, 729 N.E.2d 470, 474-475 (2000), Ill. Comp. Stat., ch. 725, § 5/115-15 (2006) (defendant must give notice “within 7 days” of “receipt of the report”); Oregon: *State v. Birchfield*, 342 Or., at 631-632, 157 P.3d, at 220 (suggesting that a “typical notice requirement” would be lawful), see Ore.Rev.Stat. § 475.235 (2007) (defendant must give notice 15 days before trial). A fifth State, Mississippi, excuses the prosecution from producing the analyst who conducted the test, so long as it produces someone. Compare *Barnette v. State*, 481 So.2d 788, 792 (Miss.1985) (cited by the Court), with *McGowen v. State*, 859 So.2d 320, 339-340 (Miss.2003) (the Sixth Amendment does not require confrontation with the particular analyst who conducted the test). It is possible that neither Mississippi's practice nor the burden-shifting statutes can be reconciled with the Court's holding. See Part III-B, *supra*. The disruption caused by today's decision has yet to take place in these States.

* * *

Laboratory analysts who conduct routine scientific tests are not the kind of conventional witnesses to whom the Confrontation Clause refers. The judgment of the Appeals Court of Massachusetts should be affirmed.

Supreme Court of the United States
Lee CRAGER, petitioner,
v.
OHIO.

No. 07-10191.
June 29, 2009.

Case below, 116 Ohio St.3d 369, 879 N.E.2d 745.

On petition for writ of certiorari to the Supreme Court of Ohio. Motion of petitioner for leave to proceed *in forma pauperis* and petition for writ of certiorari granted. Judgment vacated, and case remanded to the Supreme Court of Ohio for further consideration in light of *Melendez-Diaz v. Massachusetts*, 557 U.S. ----, 129 S.Ct. 2527, --- L.Ed.2d ---- (2009).

Supreme Court of Ohio.
The STATE of Ohio, Appellant,
v.
CRAGER, Appellee.

Nos. 2006-0294, 2006-0298.
Submitted Jan. 24, 2007.
Decided Dec. 27, 2007.

O'CONNOR, J.

*369 {¶ 1} This appeal requires us to examine issues concerning the extent that the admission into evidence of records of scientific tests (such as DNA reports) in a criminal trial implicates the Confrontation Clause of the Sixth Amendment to the United States Constitution. Our precedent in *State v. Craig*, 110 Ohio St.3d 306, 2006-Ohio-4571, 853 N.E.2d 621, strongly supports the conclusion that the DNA reports in this case are not “testimonial” as that term is defined in *Crawford v. Washington* (2004), 541 U.S. 36, 124 S.Ct. 1354, 158 L.Ed.2d 177. Furthermore, although there is a split of authority among other jurisdictions on the issues we resolve, the better-reasoned cases hold that records of scientific tests like those involved here are not “testimonial.” We therefore reverse the judgment of the court of appeals.

*370 I

{¶ 2} On April 10, 2004, Esta Boyd's body was found in the bedroom of her home in Marion. The crime scene was bloody; the coroner found that Boyd had suffered multiple blows to the head, which caused subarachnoid hemorrhaging. He estimated that she had been dead for one to three days when found. A witness testified that when he had talked to Boyd at around 7:30 or 8:00 on the evening of April 7, Boyd told him that she was “sitting there talking to Lee.” Defendant-appellee, Lee Crager, was an acquaintance of Boyd; Crager's father and Boyd were close friends. The last person to hear from Boyd spoke to her at around 8:45 on April 7.

{¶ 3} By the time Boyd's body was discovered, Crager was already in jail. He had been arrested on April 8, 2004, at around 8:30 p.m. for failing to pay his bill at Mikey's Pizza. The arresting officer reported that Crager was intoxicated and had blood on his pants and on one of his knuckles. On April 10, 2004, officers went to the Multi-County Correctional Center to recover Crager's clothing and to photograph him. Crager had cuts on the knuckles of his right hand and scratches on the inner portion of his right forearm.

{¶ 4} Laboratory testing on Crager's shirt revealed that it contained human blood stains, which contained Boyd's DNA. Testing conducted on a ring worn by Boyd revealed the presence of Crager's DNA. Cigarette butts found in an ashtray in Boyd's bedroom contained Boyd's and Crager's DNA.

{¶ 5} Other evidence pointed to Crager's presence in Boyd's home. Two palm prints from Crager were found on a mirror in Boyd's bedroom, and his thumb print was found on a beer can recovered from her home. A witness testified that he had seen Crager walking toward Boyd's house at about 5:00 p.m. on April 7. Detectives discovered that the last phone call made from Boyd's phone had been made to the Marion Area Counseling Center. The Marion Area Counseling Center had received a call from Crager between 11:30 a.m. and 12:30 p.m. on April 8.

{¶ 6} Evidence established that the killer likely was in Boyd's house for a significant period of time. Phone records indicated that Boyd's phone was used to call phone sex-line numbers on April 8 at 3:54 a.m., 10:04 a.m., 1:04 p.m., 1:06 p.m., and 1:08 p.m. There were a number of empty **747 beer cans and an empty whiskey bottle found in the building, but testimony established that Boyd rarely drank alcoholic beverages. There were 22 cigarette butts in an ashtray in Boyd's bedroom, but testimony revealed that Boyd generally did not permit smoking in her house.

{¶ 7} The case proceeded to a jury trial. Based on the way this case comes to us, the state's presentation of DNA evidence at trial is the focal point for *371 resolving the issues presented. Therefore, we recount the way that

evidence was presented in considerable detail.

{¶ 8} The state introduced the DNA evidence in its case against Crager through the testimony of DNA expert Steven M. Wiechman of the Bureau of Criminal Identification and Investigation (“BCI”). Jennifer Duvall, the DNA analyst who prepared the two DNA reports at issue, was on maternity leave at the time of trial and did not testify.

{¶ 9} Shortly before the state called Wiechman to the witness stand, Crager's defense attorney moved, outside of the presence of the jury, to prevent Wiechman from testifying regarding any DNA evidence. Counsel argued solely that Wiechman's testimony was hearsay because “Mr. Wiechman did not conduct the testing, he did not remove any samples to be tested, he did not do the actual calculations. * * * I don't see how he can testify to what someone else did.”

{¶ 10} As the record makes evident, defense counsel's opposition to Wiechman testifying was solely based on hearsay grounds, not on the Confrontation Clause. Furthermore, counsel did not object to the admission into evidence of the DNA reports themselves, but argued only that Wiechman should not be permitted to testify because he was not the DNA analyst who actually performed the tests and signed the report.

{¶ 11} In response, the prosecutor asserted that the DNA reports were business records and that Wiechman did a “technical review” of Duvall's work to ensure “the integrity of the process.” The prosecutor further argued that, as with any other business record, when “someone * * * makes a documentation, another witness can testify to it because it's done in the normal and ordinary course of business.” The trial court denied defense counsel's motion and allowed Wiechman to testify, stating, “You can ask him—ask Mr. Wiechman anything you want about ‘these aren't your calculations’, I will give you plenty of leeway on that.”^{FN1}

FN1. After the trial court's ruling, but prior to Wiechman's testimony, the state offered the testimony of BCI analyst Mark Losko, a forensic scientist in the DNA/Serology section of BCI, who did the serology work in this case. Losko testified that analysts in the serology section “examine the evidence and try to identify the stain of interest, whether it be blood, semen, or saliva. We obtain those samples for DNA testing.” Losko discussed some of the items upon which DNA testing was conducted by Duvall and explained how he obtained the samples from the items for testing. Losko's serology reports were admitted into evidence as State's Exhibits 54 and 55.

{¶ 12} Wiechman testified as to his qualifications, education, training, and experience as a DNA expert. He stated that Crager's trial was the 36th time that he had testified as an expert witness and that he had conducted DNA testing for “hundreds of cases.” He testified about the history and fundamentals of DNA testing and described safeguards in place to ensure the accuracy of all DNA *372 tests done at BCI, including a requirement that each analyst must pass a “proficiency test” twice a year, which involves analyzing a special test sample, drawing conclusions, and then submitting the test sample **748 results to be evaluated for accuracy. Wiechman further testified that BCI is accredited by the American Society of Crime Laboratory Directors, Laboratory Accreditation Board.

{¶ 13} Wiechman then explained the DNA testing review process that BCI does in every case: “Once a case is completed by an analyst it is actually gone through [sic] two review processes. One is a technical review process, and the other is an administrative process. With regards to the technical review, another qualified analyst would actually check the work of another analyst to determine whether they followed all the correct procedures, whether they agree with their case approach, anything that that analyst did, another analyst would look at and would have to agree with, and then in turn sign off on that particular case.

{¶ 14} “Once that is completed there is what's called an administrative review which a Supervisor would look at a case and basically make sure there [are] no mistakes, that pretty much everything has been followed. Then once those two review processes have been done, then the case actually goes out the door and is sent to a requesting agency. But on 100 percent of the cases that is what is done.”

{¶ 15} Wiechman stated that the review process is in place to ensure accuracy and reliability. “Mistakes can be

made, typos can be made. But to have those safeguards in place insures that there's reliability within those results.” Wiechman testified that in some circumstances DNA testing “can be quite lengthy depending upon what you're looking at.” He further stated that DNA testing is not done on every item of evidence, “[b]ecause of the volume of cases that we get, and because of so many requests. It's virtually impossible to test every single stain on every piece of evidence. It's just not only inefficient as far as case approach goes, but it's also very costly.”

{¶ 16} Wiechman testified that each case from the state includes a “case synopsis,” which explains “what happened in the case and what questions does the [Police] Department have, and what they're trying to answer with regard to the physical evidence that they have submitted.” BCI personnel also consult with law enforcement and “sometimes the Prosecutor” to identify the information that “will be of use to us to help guide us in determining what samples to look at, and that's what was done in this particular case.” Furthermore, there is “give and take” between BCI and the requesting agency as to what is tested, and “ultimately it's the Prosecutor's decision on what we'll actually look at.”

{¶ 17} Wiechman informed the jury that in this case BCI conducted DNA testing at law enforcement's request. He stated that he was not the analyst who did the testing, but that Duvall did the testing and he “technically reviewed it.”

*373 {¶ 18} Wiechman testified that his technical review of Duvall's work involved reviewing her notes, the DNA profiles she generated, her conclusions, and the final report, which consisted of “all the findings that she had within this case. I actually technically reviewed that and made sure that the decisions or conclusions that she came up with were consistent and were supported by her work that she did.”

{¶ 19} Wiechman stated that when he did the technical review, he did not know when the case would be tried or that he would be testifying. He explained his review of the DNA “profiles” by stating:

{¶ 20} “The profiles that are generated on the knowns and unknowns are basically what we call electropherograms, they're basically charts. From those charts **749 there's actually a sheet that [the analyst] determines what the profile is. I will, in turn, once she has completed her analysis I will, in fact, independently verify the correct calls that she made, or if she said ‘this is what the profile is’, I will actually go back and verify yes, in fact, she made the correct calls or correct decision on what this profile was.”

{¶ 21} Wiechman stated that he had looked at the same data Duvall looked at and that he had come to the same conclusions. In response to a question regarding the procedure for resolving a possible discrepancy, Wiechman testified:

{¶ 22} “If there's a discrepancy between the technical reviewer and the analyst, then they can get together and meet and say, ‘Okay, I think this’ or ‘I think this’, and then if a consensus still isn't reached there then it can actually either go to what we have is a Forensic Science Coordinator, or another person that can be consulted, or it can actually go to the supervisor who will in turn say, ‘Okay, yes, I believe that this person is correct or this interpretation is correct or you're both right’ and you can come to a consensus that way.” Wiechman stated that there were no discrepancies in this case.

{¶ 23} Wiechman's testimony then focused on two “rounds” of DNA testing, both of which were done by Duvall, which resulted in two separate DNA reports. State's Exhibit 56 was the first report, detailing the results of testing done on a stain on Crager's shirt that revealed Boyd's DNA. Wiechman testified that the frequency of occurrence of Boyd's DNA profile was “1 in 1.028 quintillion people.” State's Exhibit 57 was the second, later, report, detailing the results of testing done on Boyd's ring and on cigarette butts taken from the victim's bedroom. Testing of the ring revealed Crager's DNA. Wiechman testified that the frequency of occurrence of the DNA found on the ring was one in 7.8 million people. Testing of the cigarette butts also revealed Crager's DNA. Wiechman testified that the frequency of occurrence of the DNA found on one of the cigarette butts was one in 13.7 quadrillion people.

*374 {¶ 24} On cross-examination, Wiechman stated that he “actually technically reviewed the second [round

of testing], but in preparation for court I reviewed, unofficially to prepare for testimony, I reviewed the entire case file.” He agreed with defense counsel’s statements that DNA testing is limited to revealing “what something is * * * and perhaps who it came from” and cannot reveal “how it got there.” Wiechman further elaborated:

{¶ 25} “All I can say is that this particular DNA profile is on this particular piece of evidence, and this person may or may not have contributed that stain or that profile. * * * I guess in general terms you can’t really say ‘okay, this DNA got on this particular item in this particular time’ or even within a certain window. All you can say [is] ‘this is what I found, it’s consistent with these people’ or ‘not consistent with these people. Here are my conclusions’, and that’s what we report.”

{¶ 26} On redirect, Wiechman stated that the purpose of a DNA test is not to match a particular individual: “The test is just to produce a profile. When you actually do the comparison, that is when you determine whether or not a person may or may not have contributed to that stain.” Further, “[y]ou have no idea when you’re doing the analysis if you’re gonna get one person, if you’re gonna get two, if you’re gonna get three. I’ve had cases where you get lots of people in a particular stain. You just don’t know until you actually do the analysis. When you sit down and do your interpretation of the data and then make the comparison between the knowns **750 and the unknowns. Then you can determine ‘yes, this came from a person that’s consistent with this person, it’s not consistent with that person’. That’s actually after you do the physical bench work. Then you sit down and you interpret your data. * * * [T]he actual data is presented in the report and then there’s paragraph form data that actually explains what that data means.”

{¶ 27} On recross, Wiechman explained the extent of the DNA testing that yielded the DNA of only two persons (Boyd and Crager) on the items tested. In response to defense counsel’s questions, Wiechman explained that the “synopsis” provided by whoever requests testing, which sets forth the details of the case, does not dictate the results: “I make that determination [that the DNA was consistent with Boyd and Crager] based on the data that I have, that it supports that conclusion that it’s consistent with these two people. So although we take the synopsis into consideration, when we’re making our interpretation of the data, that’s when the conclusion is drawn. * * * [A]ll of the profiles obtained in this case could be explained with one interpretation, this interpretation in this case consistent with these two people.” Wiechman also stated that some items that could have been tested were not, because testing is done only on those items that are “requested to be tested.”

*375 {¶ 28} On final redirect, Wiechman clarified that the synopsis presented to BCI by law-enforcement personnel when they request testing is not a factor BCI’s experts rely on in reaching their determinations: “The interpretation is made based upon the data that’s obtained in the case. The synopsis is only to guide us and to help support the findings that we have.”

{¶ 29} The prosecutor then asked, “[I]f law enforcement said to you, ‘Hey, we are satisfied it’s Lee Crager, and that’s the only one person’s DNA we want you to look for’, would you do the test that way?” Wiechman responded:

{¶ 30} “No. * * * [W]e’re an unbiased agency. So we’re not looking for any one particular person. We’re saying ‘okay, these are the items that you’re requesting us to perform DNA analysis on, these are what we’ll do’. I have no idea what we have, we’ll present the evidence or the findings that we have, and if that’s sufficient then perhaps no other request will be made. If it’s not sufficient and they feel additional testing’s required, then they can request that. But at this time once we based our conclusions on the data that we had, based on those two rounds of testing, it was determined by [the prosecutor’s] office that that was sufficient for him, and that’s what was done.”

{¶ 31} Finally, in response to a question regarding whether the amount of DNA testing done in this case was “more or less than [is] typically done in similar cases,” Wiechman stated, “Depending on the complexity, this is probably about average.”

{¶ 32} At the conclusion of the jury trial, Crager was found guilty of aggravated murder and aggravated burglary. Upon Crager’s appeal, the court of appeals reversed the judgment of the trial court and remanded for further proceedings, concluding that the DNA report was testimonial and that Crager’s Sixth Amendment right to confrontation had been violated. Based on that determination, the court of appeals found other assignments of error

moot and did not address them.

{¶ 33} This court accepted the court of appeals' certification of a conflict and ordered the parties to brief the issue as stated in the court of appeals' journal entry:

{¶ 34} “Are records of scientific tests, conducted by a government agency at the **751 request of the State for the specific purpose of being used as evidence in the criminal prosecution of a specific individual, ‘testimonial’ under *Crawford v. Washington* (2004), 541 U.S. 36, 124 S.Ct. 1354 [158 L.Ed.2d 177]?” 109 Ohio St.3d 1421, 2006-Ohio-1967, 846 N.E.2d 532.

{¶ 35} In the case certified as being in conflict, *State v. Cook*, 6th Dist. No. WD-04-029, 2005-Ohio-1550, 2005 WL 736671, ¶ 19-20, the Sixth District Court of Appeals held that law-enforcement records of checks done on a breath-alcohol testing machine and of the qualifications of the officer who was the custodian of *376 those records were not testimonial under *Crawford*, because they bore “no similarities to the types of evidence the Supreme Court labeled as testimonial” and also because the records qualified as business records under Evid.R. 803(6), “which, at least according to dicta in *Crawford*, are not testimonial.”

{¶ 36} We also accepted a discretionary appeal, 109 Ohio St.3d 1423, 2006-Ohio-1967, 846 N.E.2d 533, on one of the state's propositions of law, which asserts:

{¶ 37} “A criminal defendant's constitutional right to confrontation is not violated when a DNA analyst testifies at his trial in place of the DNA analyst who conducted the DNA testing. Neither records which are admissible under the business records exception to the rule against hearsay nor expert testimony, are testimonial under *Crawford v. Washington* (2004), 541 U.S. 36, 124 S.Ct. 1354 [158 L.Ed.2d 177].”

II

[1] {¶ 38} The starting point for our analysis is that the DNA reports admitted into evidence in this case were “business records,” under the hearsay exception of Evid.R. 803(6). The reports were made “from information transmitted by, a person with knowledge, [and are] kept in the course of a regularly conducted business activity,” and it “was the regular practice of that business” (BCI) to make the reports. Furthermore, the reports were introduced through the testimony of a “qualified witness” (Wiechman) and nothing suggests that the “method or circumstances of preparation indicate lack of trustworthiness.” See *State v. Craig*, 110 Ohio St.3d 306, 2006-Ohio-4571, 853 N.E.2d 621, ¶ 81-82 (autopsy reports are business records).

{¶ 39} This case presents the issue whether the DNA reports, even though properly admissible as business records under the applicable exception to the hearsay rule, might nevertheless violate the Sixth Amendment to the United States Constitution, which provides that “[i]n all criminal prosecutions, the accused shall enjoy the right * * * to be confronted with the witnesses against him.”

{¶ 40} Prior to the United States Supreme Court's *Crawford* decision, the determination that the DNA reports were business records would have ended the inquiry under the Confrontation Clause and resulted in the conclusion that Crager's right to confrontation was not violated. The Supreme Court had held in *Ohio v. Roberts* (1980), 448 U.S. 56, 66, 100 S.Ct. 2531, 65 L.Ed.2d 597, that an unavailable witness's out-of-court statement against a criminal defendant was not barred by the Confrontation Clause if it bore adequate “indicia of reliability,” i.e., if it fell within a “firmly rooted hearsay exception,” or it bore “particularized guarantees of trustworthiness.” The DNA reports in this case, as Evid.R. 803(6) business records, satisfy the *Roberts* test.

*377 {¶ 41} However, *Crawford* overruled *Roberts* by establishing in its place a new and very different approach. In *Crawford*, 541 U.S. at 53-54, 124 S.Ct. 1354, 158 L.Ed.2d 177, the Supreme Court held that **752 “testimonial” out-of-court statements presented in a criminal trial violate the Confrontation Clause unless the witness was unavailable to testify at trial and the defendant had a prior opportunity to cross-examine the witness. After *Crawford*, the key inquiry for Confrontation Clause purposes is whether a particular statement is testimonial or nontestimonial.

{¶ 42} The *Crawford* court stated, “Where nontestimonial hearsay is at issue, it is wholly consistent with the Framers' design to afford the States flexibility in their development of hearsay law-as does *Roberts*, and as would an approach that exempted such statements from Confrontation Clause scrutiny altogether. Where testimonial evidence is at issue, however, the Sixth Amendment demands what the common law required: unavailability and a prior opportunity for cross-examination.” *Crawford* at 68, 124 S.Ct. 1354, 158 L.Ed.2d 177; see also *State v. Muttart*, 116 Ohio St.3d 5, 2007-Ohio-5267, 875 N.E.2d 944, ¶ 59 (only testimonial statements implicate the Confrontation Clause).

{¶ 43} *Crawford* noted that “not all hearsay implicates the Sixth Amendment's core concerns,” *id.* at 51, 124 S.Ct. 1354, 158 L.Ed.2d 177, and that its holding did not apply to all hearsay, because many statements entered into evidence pursuant to hearsay exceptions are “not testimonial-for example, business records or statements in furtherance of a conspiracy,” *id.* at 56, 124 S.Ct. 1354, 158 L.Ed.2d 177. See also *Davis v. Washington* (2006), 547 U.S. 813, 822, 126 S.Ct. 2266, 2273, 165 L.Ed.2d 224 (nontestimonial hearsay, “while subject to traditional limitations upon hearsay evidence, is not subject to the Confrontation Clause”).

{¶ 44} The *Crawford* court, 541 U.S. at 51-52, 124 S.Ct. 1354, 158 L.Ed.2d 177, noted three “formulations” of a “core class” of testimonial statements: “ ‘*ex parte* in-court testimony or its functional equivalent *427 - that is, material such as affidavits, custodial examinations, prior testimony that the defendant was unable to cross-examine, or similar pretrial statements that declarants would reasonably expect to be used prosecutorially,’ Brief for Petitioner 23; ‘extrajudicial statements * * * contained in formalized testimonial materials, such as affidavits, depositions, prior testimony, or confessions,’ *White v. Illinois*, 502 U.S. 346, 365, 112 S.Ct. 736, 116 L.Ed.2d 848 (1992) (Thomas, J., joined by Scalia, J., concurring in part and concurring in judgment); [and] ‘statements that were made under circumstances which would lead an objective witness reasonably to believe that the statement would be available for use at a later trial,’ Brief for National Association of Criminal Defense Lawyers et al. as *Amici Curiae* 3.”

{¶ 45} In *State v. Stahl*, 111 Ohio St.3d 186, 2006-Ohio-5482, 855 N.E.2d 834, at paragraph one of the syllabus, this court adopted the third “formulation” to hold *378 that “[f]or Confrontation Clause purposes, a testimonial statement includes one made ‘under circumstances which would lead an objective witness reasonably to believe that the statement would be available for use at a later trial.’ ” *Id.*, quoting *Crawford*. *Stahl* has no application here because *Stahl* involved the testimonial nature of actual oral “statements” of a declarant and did not involve records of scientific tests or the business-records exception to the hearsay rule.^{FN2} Furthermore, as explained below, a statement is **753 not “testimonial” merely because it may reasonably be expected to be introduced at a later trial, although that may be a proper consideration in certain other situations involving specific oral statements of a declarant.

FN2. Our recent decision in *State v. Siler*, 116 Ohio St.3d 39, 2007-Ohio-5637, 876 N.E.2d 534, involved statements made by a witness to a police officer during interrogation, and therefore is distinguishable from the instant case.

{¶ 46} In *State v. Craig*, 110 Ohio St.3d 306, 2006-Ohio-4571, 853 N.E.2d 621, we concluded that the defendant's Confrontation Clause rights were not violated when an autopsy report prepared by a doctor who did not testify at trial was entered into evidence, and a different doctor provided expert testimony about the autopsy after reviewing the report and supporting materials. As to the testifying doctor in *Craig*, this court held that her expert testimony did not violate the defendant's right to confrontation, because the jury was fully aware that she had not personally conducted or been present at the autopsy and because the defense had the opportunity to question her “about the procedures that were performed, the test results, and her expert opinion about the time and cause of death.” *Id.* at ¶ 79. We further held that the autopsy report was properly admitted as a business record under Evid.R. 803(6). *Id.* at ¶ 80.

{¶ 47} We based our decision in *Craig* in part on the *Crawford* court's statement that “business records are, ‘by their nature,’ not testimonial.” *Craig*, at ¶ 81, quoting *Crawford*, 541 U.S. at 56, 124 S.Ct. 1354, 158 L.Ed.2d 177. We reasoned: “An autopsy report, prepared by a medical examiner and documenting objective findings, is the ‘quintessential business record.’ *Rollins v. State* (2005), 161 Md.App. 34, 81, 866 A.2d 926. ‘The essence of the business record hearsay exception contemplated in *Crawford* is that such records or statements are not testimonial in

nature because they are prepared in the ordinary course of regularly conducted business and are ‘by their nature’ not prepared for litigation.’ *People v. Durio* (2005), 7 Misc.3d 729, 734, 794 N.Y.S.2d 863.

{¶ 48} “Most jurisdictions that have addressed the issue under *Crawford* have found that autopsy reports are admissible as nontestimonial business or public records. See *Moreno Denoso v. State* (Tex.App.2005), 156 S.W.3d 166, 180-182 (autopsy report was not testimonial and was admissible without the deceased pathologist's testimony); *Durio*, 7 Misc.3d at 734-737, 794 N.Y.S.2d 863 (autopsy *379 report was nontestimonial and its admission without the testimony of the medical examiner who performed the autopsy did not violate *Crawford*); *State v. Cutro* (2005), 365 S.C. 366, 378, 618 S.E.2d 890 (autopsy report was nontestimonial).

{¶ 49} “ * * *

{¶ 50} “We agree with the majority view under *Crawford* and conclude that autopsy records are admissible as nontestimonial business records.” *Craig*, 110 Ohio St.3d 306, 2006-Ohio-4571, 853 N.E.2d 621, at ¶ 82-83 and 88.

[2] {¶ 51} The autopsy report at issue in *Craig* is not distinguishable from the DNA reports in this case. Like that autopsy report, the DNA reports here are nontestimonial. We reject the position that these DNA reports are different because the lab work that produced them was done at the request of the prosecution or because it was reasonably expected that the reports would be used in a criminal trial.

{¶ 52} Although BCI's statutory mission under R.C. 109.52 is to “aid” law enforcement in solving crimes, BCI is not itself an “arm” of law enforcement in the sense that the word implies a specific purpose to obtain incriminating results. As the testimony of Wiechman detailed above demonstrates, although BCI conducts tests at the request of law-enforcement personnel or **754 other entities affiliated with the state, BCI maintains its independence to objectively test and analyze the samples it receives.

{¶ 53} Furthermore, BCI's analysis and testing are not intended to arrive at a predetermined result. If that were the case, then BCI would have no credibility and would be unable to maintain its accreditation. Rather, BCI's testing can both include and exclude suspected potential donors from the DNA pool, as Wiechman's testimony recounts. Therefore, there is nothing inherently untrustworthy about the tests conducted by BCI. We decline to create standards that would evaluate scientific tests conducted by BCI differently than we would evaluate similar tests conducted by a private laboratory. The same standards also should apply when the state wishes to use scientific tests conducted at the request of a criminal defendant against that defendant.

{¶ 54} Although it could have been reasonably expected that the DNA reports would be used in a criminal trial, that consideration was also present with the autopsy report in *Craig*. As in *Craig*, the scientific-test reports in this case were prepared in the ordinary course of regularly conducted business and so were not testimonial.

{¶ 55} We fully agree with those courts that have rejected arguments regarding the “testimonial” nature of scientific-test reports such as the DNA reports involved in this case.

*380 {¶ 56} In holding that serology reports were properly admitted even though the analyst who prepared the reports did not testify, the Supreme Court of North Carolina stated in *State v. Forte* (2006), 360 N.C. 427, 435, 629 S.E.2d 137: “Under the Supreme Court's analysis [in *Crawford*], the reports at issue here are not testimonial. They do not fall into any of the categories that the Supreme Court defined as unquestionably testimonial. These unsworn reports, containing the results of [the preparer's] objective analysis of the evidence, along with routine chain of custody information, do not bear witness against defendant. * * * Instead, they are neutral, having the power to exonerate as well as convict. Although we acknowledge that the reports were prepared with the understanding that eventual use in court was possible or even probable, they were not prepared exclusively for trial and [the preparer] has no interest in the outcome of any trial in which the records might be used.”

{¶ 57} In *People v. Brown* (2005), 9 Misc.3d 420, 424, 801 N.Y.S.2d 709, the court reasoned:

{¶ 58} “The notes and records of the laboratory technicians who tested the DNA samples in this case were not

made for investigative or prosecutorial purposes but rather were made for the routine purpose of ensuring the accuracy of the testing done in the laboratory and as a foundation for formulating the DNA profile.

{¶ 59} “ * * * [T]he notes of the many laboratory personnel who conducted the four steps of DNA profiling over several days were made during a routine, non-adversarial process meant to ensure accurate analysis and not specifically prepared for trial. Because DNA testing requires multiple steps done by multiple technicians over multiple days, all of the steps in the process must be documented for the benefit of supervisors and technicians who perform subsequent testing functions.”

{¶ 60} This case is very similar to *People v. Geier* (2007), 41 Cal.4th 555, 61 Cal.Rptr.3d 580, 161 P.3d 104, a recent decision of the Supreme Court of California. In a thorough and well-reasoned opinion, the *Geier* court specifically held that the DNA report at issue in that case **755 was not testimonial for Confrontation Clause purposes and so the defendant's Sixth Amendment rights were not violated by its admission into evidence. *Id.* at 607, 61 Cal.Rptr.3d 580, 161 P.3d 104.

{¶ 61} In *Geier*, the prosecution contracted with a private laboratory to conduct DNA testing. The prosecution's DNA expert—who did not personally conduct the testing but did sign the report as the supervisor of the biologist who did the actual testing—testified that in her opinion DNA extracted from vaginal swabs taken from the victim matched a sample of the defendant's DNA. The defendant argued that the DNA expert's testimony violated his Sixth Amendment confrontation*381 right pursuant to *Crawford* because the expert's opinion was based on testing that the expert did not personally conduct. *Id.* at 593-594, 61 Cal.Rptr.3d 580, 161 P.3d 104.

{¶ 62} The defendant in *Geier* further argued that under *Crawford*, the DNA report that was the basis of the expert's testimony was testimonial “because it was a statement ‘made under circumstances that would lead an objective witness reasonably to believe that the statement would be available for use at a later trial.’ ” *Geier*, 41 Cal.4th at 598, 61 Cal.Rptr.3d 580, 161 P.3d 104, quoting *Crawford*, 541 U.S. at 52, 124 S.Ct. 1354, 158 L.Ed.2d 177. The *Geier* court stated the issue as “whether the admission of scientific evidence, like laboratory reports, constitutes a testimonial statement that is inadmissible unless the person who prepared the report testifies or *Crawford*'s conditions-unavailability and a prior opportunity for cross-examination-are met,” and then observed that courts disagree as to the answer. *Id.*

{¶ 63} The court noted that some courts adopt a bright-line test concluding that because scientific-test evidence (whether it be fingerprint analysis, autopsy reports, serology reports, drug-analysis reports, or DNA reports) is prepared for possible use in a criminal trial, it is “testimonial” under *Crawford*. As typical examples of this position, the court cited *State v. Caulfield* (Minn.2006), 722 N.W.2d 304, and *Las Vegas v. Walsh* (2005), 121 Nev. 899, 124 P.3d 203; and also the decision of the court of appeals below in this case: *State v. Crager*, 164 Ohio App.3d 816, 2005-Ohio-6868, 844 N.E.2d 390. *Geier*, 41 Cal.4th at 599, 61 Cal.Rptr.3d 580, 161 P.3d 104.

{¶ 64} The *Geier* court then noted that other courts have held that scientific-test evidence is not testimonial, even if it was prepared for possible use at trial. Some courts base this conclusion on indications within *Crawford* that such evidence does not implicate the abuses the Confrontation Clause is meant to prevent, and other courts rely on *Crawford*'s comments that “business records” generally are not within the scope of Confrontation Clause concerns. *Id.*

{¶ 65} The *Geier* court concluded that “[t]hese more nuanced readings of *Crawford* reject those readings that ‘focus too narrowly on the question of whether a document may be used in litigation. This was but one of the several considerations that *Crawford* identified as bearing on whether evidence is testimonial [and] [n]one of these factors was deemed dispositive.’ (*People v. So Young Kim* (2006), 368 Ill.App.3d 717 [720], 307 Ill.Dec. 92, 859 N.E.2d 92, 94 [certification of Breathalyzer machine used to determine blood-alcohol content not testimonial].)” *Geier*, 41 Cal.4th at 600, 61 Cal.Rptr.3d 580, 161 P.3d 104. See also *People v. Johnson* (2004), 121 Cal.App.4th 1409, 1412, 18 Cal.Rptr.3d 230 (“A laboratory report does not ‘bear testimony,’ or function as the equivalent of in-court testimony. If the preparer had appeared to testify * * * he or she **756 would *382 merely have authenticated the document”); *Commonwealth v. Verde* (2005), 444 Mass. 279, 283-284, 827 N.E.2d 701 (certificates of chemical analysis “merely state the results of a well-recognized scientific test determining the composition and quantity of the

substance” and have “very little kinship to the type of hearsay the confrontation clause was intended to exclude * * *. [I]t is akin to a business or official record, which the [*Crawford*] Court stated was not testimonial in nature”).

{¶ 66} After reviewing the various cases from around the country (including our decision in *State v. Craig*), the California Supreme Court in *Geier* concluded, “While we have found no single analysis of the applicability of *Crawford* and *Davis* to the kind of scientific evidence at issue in this case to be entirely persuasive, we are nonetheless more persuaded by those cases concluding that such evidence is not testimonial, based on our own interpretation of *Crawford* and *Davis*.” *Geier*, 41 Cal.4th at 605, 61 Cal.Rptr.3d 580, 161 P.3d 104. The *Geier* court determined that the key factor for determining that a scientific-test report is “testimonial” is whether it “describes a past fact related to criminal activity” even when the report was made at the request of law-enforcement officers and was prepared for possible use at trial. *Id.*

{¶ 67} In answering this key question in the negative, the *Geier* court stated that the report of the DNA analyst who did the actual testing “constitute[s] a contemporaneous recordation of observable events rather than the documentation of past events. That is, [the analyst] recorded her observations regarding the receipt of the DNA samples, her preparation of the samples for analysis, and the results of that analysis as she was actually performing those tasks. ‘Therefore, when [she] made these observations, [she]-like the declarant reporting an emergency in *Davis*-[was] “not acting as [a] witness[];” and [was] “not testifying.” ’ ” *Id.* 41 Cal.4th at 605-606, 61 Cal.Rptr.3d 580, 161 P.3d 104, quoting *United States v. Ellis* (C.A.7, 2006), 460 F.3d 920, 926-927.

{¶ 68} We agree with this analysis in *Geier*, which specifically rejects the approach of those courts that hold that laboratory reports are testimonial “because their primary purpose was to establish a fact at trial regarding the defendant’s guilt,” *id.*, including *State v. March* (Mo.2007), 216 S.W.3d 663. *March* and decisions like it improperly read *Davis* to find any statement “testimonial” whenever it might reasonably be expected to be used at trial, when the inquiry actually should focus on “whether the statement represents the contemporaneous recordation of observable events.” *Geier*, 41 Cal.4th at 606 and 607, 61 Cal.Rptr.3d 580, 161 P.3d 104.

{¶ 69} In ultimately determining that the DNA report at issue in that case was nontestimonial, the *Geier* court observed that the report and notes of the DNA analyst who did the testing “were generated as part of a standardized scientific *383 protocol that she conducted pursuant to her employment at [the lab]. While the prosecutor undoubtedly hired [the lab] in the hope of obtaining evidence against defendant, [the testing analyst] conducted her analysis, and made her notes and report, as part of her job, not in order to incriminate defendant. Moreover, to the extent [the testing analyst’s] notes, forms and report merely recount the procedures she used to analyze the DNA samples, they are not themselves accusatory, as DNA analysis can lead to either incriminatory or exculpatory results. Finally, the accusatory opinions in this case * * * were reached and conveyed not through **757 the nontestifying technician’s laboratory notes and report, but by the testifying witness.

{¶ 70} “ * * * In simply following [the lab’s] protocol of noting carefully each step of the DNA analysis, recording what she did with each sample received, [the testing analyst] did not ‘bear witness’ against defendant. (*State v. Forte*, supra, [360 N.C. at 435] 629 S.E.2d at p. 143.) Records of laboratory protocols followed and the resulting raw data acquired are not accusatory. ‘Instead, they are neutral, having the power to exonerate as well as convict.’ (*Ibid.*)” *Geier*, 41 Cal.4th at 607, 61 Cal.Rptr.3d 580, 161 P.3d 104.

III

{¶ 71} Based on the *Geier* court’s broad generalized conclusion that DNA and other scientific-testing reports are manifestly not testimonial, any factual distinctions between the situation in that case and the situation in the case sub judice are irrelevant for our purposes. Thus, it makes no difference that the DNA testing in *Geier* was done by a private laboratory in contrast to the fact that BCI did the testing in the present case. Furthermore, it makes no difference that the analyst who testified in *Geier* personally signed the DNA report, in contrast to the facts here that Wiechman did not sign either DNA report and specifically participated only in the “second round” of DNA testing that produced State’s Exhibit 57. Due to the nature of the *Geier* court’s fundamental reasoning, its conclusion that DNA reports are nontestimonial is fully applicable to the circumstances of this case as persuasive authority.

{¶ 72} The reasoning of *Geier* is also fully consistent with our reasoning and result in *Craig*. See 110 Ohio

St.3d 306, 2006-Ohio-4571, 853 N.E.2d 621. The DNA reports at issue in this case are no different from the autopsy report at issue in *Craig* for Confrontation Clause purposes. Under Evid.R. 803(6), the reports are business records of scientific tests that are nontestimonial under *Crawford* and *Davis*. The reports fall well outside the “core class” of statements identified in *Crawford* that may implicate the Confrontation Clause. Furthermore, in this case, Wiechman was a qualified expert who was subject to cross-examination, as was the testifying doctor in *Craig*. When DNA reports are ***384** properly determined to be nontestimonial, it necessarily follows that Crager's Sixth Amendment Confrontation Clause rights were not violated.

{¶ 73} Although we acknowledge that the record shows that Wiechman played no role in developing the DNA analysis that resulted in State's Exhibit 56 in this case, that concern is irrelevant. As in *Geier* and in *Craig*, the testifying witness, Wiechman, conveyed the “testimonial” aspects of the DNA results against Crager, and Wiechman was subject to cross-examination. Just as in *Craig*, the defense had the opportunity to question Wiechman “about the procedures that were performed, the test results, and [his] expert opinion about” the conclusions to be drawn from the DNA reports. *Id.*, 110 Ohio St.3d 306, 2006-Ohio-4571, 853 N.E.2d 621, at ¶ 79. Wiechman had fully reviewed the complete file, not just the DNA reports admitted into evidence and not just the report he participated in preparing, and had reached his own conclusions about both reports “to a reasonable degree of scientific certainty.” It is thus of no import that he did not actively participate in both rounds of DNA testing.

{¶ 74} An examination of defense counsel's cross-examination of Wiechman reveals that this case does not implicate the types of abuses that concerned the *Crawford* court. Crager did not challenge the specific testing protocol or the accuracy of ****758** the raw data. There is no indication in the questions or in Wiechman's responses that there were any flaws in the testing itself. Rather, defense counsel principally questioned Wiechman about general matters known to any DNA expert, such as the limits of what DNA testing can establish. When defense counsel did question the specifics of the DNA test results in this case, Wiechman was fully qualified to, and did, answer any questions defense counsel asked.

{¶ 75} Furthermore, for the most part, Wiechman responded with answers that helped the defense make its points, such as that DNA testing cannot establish how a particular stain came to be on a particular item or when a person's DNA might have appeared on an item. In addition, defense counsel was able to establish through Wiechman's testimony that some items that could have been tested were not. As with the autopsy in *Craig*, Wiechman readily asserted that he himself had not done the actual DNA testing, so the jury was well aware of that fact.

{¶ 76} It is apparent that Crager's right to confrontation was not at all affected by Wiechman's testifying. Moreover, if Duvall, who actually did the DNA testing, had testified instead of Wiechman, her responses to defense counsel's questions likely would have been very similar, if not identical, to Wiechman's. There are no indications that Crager was not able to conduct a meaningful cross-examination concerning State's Exhibit 56.

***385** {¶ 77} As a final matter, the practical results of affirming the judgment of the court of appeals in this case would be problematical. If all the DNA analysts who had actively participated in the testing and review process that generated the DNA reports were unavailable to testify (for example, if all had died), should that mean that no expert DNA witness, after reviewing the relevant materials, would have been qualified to testify? If that were the situation, would the DNA tests have to be redone, even though there are no questions about the accuracy of the tests, and there are no indications of any discrepancies? These potential consequences seem especially incongruous when viewed in light of the considerations discussed above, i.e., that records of laboratory protocols that were followed and of the resulting raw data are not accusatory and therefore are not “testimonial.”

{¶ 78} For all the foregoing reasons, we hold that records of scientific tests are not “testimonial” under *Crawford*. This conclusion applies to include those situations in which the tests are conducted by a government agency at the request of the state for the specific purpose of potentially being used as evidence in the criminal prosecution of a particular person.

{¶ 79} We further hold that a criminal defendant's constitutional right to confrontation is not violated when a qualified expert DNA analyst testifies at trial in place of the DNA analyst who actually conducted the testing. In that

situation, the testifying expert analyst is the witness who is subject to cross-examination and is the one who presents the true “testimonial” statements.

{¶ 80} Accordingly, we reverse the judgment of the court of appeals. We remand the cause to that court to address the unresolved assignments of error that it found moot and therefore did not address.

Judgment reversed and cause remanded.

LUNDBERG STRATTON, O'DONNELL, and LANZINGER, JJ., concur.

**759 KLINE, J., concurs separately.

MOYER, C.J., and PFEIFER, J., dissent.

ROGER L. KLINE, J., of the Fourth Appellate District, sitting for CUPP, J.

KLINE, J., concurring.

{¶ 81} I concur in the majority opinion and find that the DNA reports at issue in this case are business records that are not “testimonial” under *Crawford v. Washington* (2004), 541 U.S. 36, 124 S.Ct. 1354, 158 L.Ed.2d 177. I write separately to explain why I respectfully disagree with the lower court's holding that “the fact that these [DNA] reports are prepared *solely* for prosecution *386 makes them testimonial.” (Emphasis added.) *State v. Crager*, 164 Ohio App.3d 816, 2005-Ohio-6868, 844 N.E.2d 390, ¶ 37. In my view, absent evidence to the contrary, it should be presumed that the primary purpose behind any county prosecutor's request for DNA analysis is to seek justice, not merely to prosecute or convict a defendant.

{¶ 82} In Ohio, the county prosecutor is required to follow a code of ethics. As in effect at the relevant time, Canon 7 of the Code of Professional Responsibility, EC 7-13 provides:

{¶ 83} “The responsibility of a public prosecutor differs from that of the usual advocate; *his duty is to seek justice, not merely to convict*. This special duty exists because: (1) the prosecutor represents the sovereign and therefore should use restraint in the discretionary exercise of governmental powers, such as in the selection of cases to prosecute; (2) during trial the prosecutor is not only an advocate but he also may make decisions normally made by an individual client, and those affecting the public interest should be fair to all; and (3) in our system of criminal justice the accused is to be given the benefit of all reasonable doubts.” (Emphasis added.)

{¶ 84} Here, the prosecutor asked BCI for the DNA analysis through glasses of justice, not glasses of conviction. Prosecutors' decisions are to “be fair to all.” *Id.* This includes *Crager*. When the prosecutor asked for the analysis, he certainly did not know the results. At the precise time he asked, the future DNA results could (1) exonerate *Crager* and eliminate the need for a trial or prosecution or (2) implicate *Crager* and require a trial or prosecution. The record demonstrates that the prosecutor's conduct in this area comports with this high standard of professional responsibility.

{¶ 85} DNA expert Steven M. Wiechman testified to the guidelines BCI follows when conducting its tests. He said, “[U]ltimately it's the Prosecutor's decision on what we'll actually look at.” However, he stated that the prosecutor does not dictate the results and that BCI is “an unbiased agency.”

{¶ 86} Therefore, in my view, when BCI followed its “unbiased” guidelines and prepared the business records at the request and general direction of the county prosecutor, it did so with the primary purpose of seeking justice. Justice may, or may not, require prosecution.

{¶ 87} Accordingly, in the context of this explanation, I concur in the majority opinion.

PFEIFER, J., dissenting.

*387 {¶ 88} Because the majority opinion is contrary to the Supreme Court's holding in *Crawford v. Washington* (2004), 541 U.S. 36, 124 S.Ct. 1354, 158 L.Ed.2d 177, conflicts with syllabus law from this court's recent decision in *State v. Stahl*, 111 Ohio St.3d 186, 2006-Ohio-5482, 855 N.E.2d 834, and limits a defendant's ability to cross-**760 examine the person who has produced a DNA report that essentially identifies him as the perpetrator, I dissent.

{¶ 89} DNA evidence has become the “smoking gun” in criminal trials. It can be a powerful tool for conviction or exoneration. DNA evidence is too central to prosecution to allow the routine introduction of such evidence as a business record. To do so would permit a records clerk to present the most important piece of evidence against a defendant without allowing that defendant to cross-examine the person responsible for preparing the report.

{¶ 90} The most important piece of evidence in this case is State's Exhibit 56, the DNA report that identifies Esta Boyd's blood on defendant Crager's shirt. Steve Wiechman testified regarding the contents of that report and to its ultimate conclusion. Through Wiechman's testimony, State's Exhibit 56 was entered into evidence. But one inescapable fact finally emerges well into the majority opinion: Wiechman played no role in producing State's Exhibit 56. The majority opinion cites Wiechman's testimony that he “technically reviewed” the work of the DNA analyst, Jennifer Duvall, who did the actual testing on the blood samples in State's Exhibit 56. The majority opinion describes that technical review, and states that “Wiechman stated that when he did the technical review, he did not know when the case would be tried or that he would be testifying.” Majority opinion at ¶ 19. The only problem is that Wiechman did not, in fact, technically review State's Exhibit 56. That fact emerges farther into the majority opinion, though it is treated as unremarkable by the majority: “On cross-examination, Wiechman stated that he ‘actually technically reviewed the second [round of testing], but in preparation for court I reviewed, unofficially to prepare for testimony, I reviewed the entire case file.’ ” Majority opinion at ¶ 24. So, despite the majority's citing Wiechman's testimony that when he did his technical review, “he did not know when the case would be tried or that he would be testifying,” the truth is that Wiechman did not conduct the technical review of State's Exhibit 56, but instead “reviewed” Duvall's file regarding State's Exhibit 56 for the sole purpose of preparing to testify.

{¶ 91} Though he had nothing to do with preparing the DNA report that became State's Exhibit 56, Wiechman testified about its contents. His testimony regarding State's Exhibit 56 was largely a recitation of Duvall's report:

{¶ 92} “Q: And showing you what's been marked as State's Exhibit 56, can you identify that for us?

*388 {¶ 93} “A: Yes. This appears to be a copy of Jennifer Duvall's report regarding this case.

{¶ 94} “Q: And does that contain the findings and conclusions that you have testified to thus far?

{¶ 95} “A: Yes, it does.

{¶ 96} “Q: And are those findings and conclusions determinations you would hold to a reasonable degree of scientific certainty?

{¶ 97} “A: Yes.”

{¶ 98} With this factual background established, the import of the majority's holding becomes clearer. The majority holds that a DNA report can be admitted into evidence without the person who produced it having to testify about it. Under the majority's ruling, a defendant's rights under the Confrontation Clause are not affected when one DNA expert testifies as to the contents of another DNA expert's DNA report, even when the nontestifying DNA expert's report is admitted into evidence**761 based upon the testifying witness's testimony.

{¶ 99} In *Crawford v. Washington*, 541 U.S. at 53-54, 124 S.Ct. 1354, 158 L.Ed.2d 177, the Supreme Court of the United States stated that the Confrontation Clause bars “admission of testimonial statements of a witness who did not appear at trial unless he was unavailable to testify, and the defendant had had a prior opportunity for cross-examination.”

{¶ 100} The court in *Crawford* left “for another day any effort to spell out a comprehensive definition of ‘testimonial.’ ” *Crawford*, 541 U.S. at 68, 124 S.Ct. 1354, 158 L.Ed.2d 177. That day has yet to arrive, but the court in *Crawford* noted “various formulations” of the “core class” of testimonial statements, without adopting one as definitive: (1) ex parte in-court testimony or its equivalent, such as affidavits, custodial interrogations, prior

testimony for which the defendant had no opportunity to cross-examine, or other pretrial statements that declarants would reasonably expect to be used in a prosecution, (2) extrajudicial statements in formalized testimonial materials, such as affidavits, depositions, prior testimony, or confessions, or (3) statements made under circumstances that would lead an objective witness to a reasonable belief that the statement could be used at a later trial. *Crawford*, 541 U.S. at 51-52, 124 S.Ct. 1354, 158 L.Ed.2d 177.

{¶ 101} In *State v. Stahl*, 111 Ohio St.3d 186, 2006-Ohio-5482, 855 N.E.2d 834, this court adopted as definitive the third of the formulations discussed by the *Crawford* court:

{¶ 102} “For Confrontation Clause purposes, a testimonial statement includes one made ‘under circumstances which would lead an objective witness reasonably to believe that the statement would be available for use at a later trial.’ ” Id. at *389 paragraph one of the syllabus, quoting *Crawford* at 52, 124 S.Ct. 1354, 158 L.Ed.2d 177.

{¶ 103} The majority tries to ignore *Stahl* and its first syllabus paragraph, adopting curious reasoning. The majority writes that “*Stahl* has no application here because *Stahl* involved the testimonial nature of actual oral ‘statements’ of a declarant and did not involve records of scientific tests or the business-records exception to the hearsay rule.” Majority opinion at ¶ 45. The majority acts as if nonoral statements are not “actual.” Are nonoral statements pretend? The *Stahl* syllabus is not self-limiting to “actual oral statements”—it applies to “statements.” Evid.R. 801(A) defines a “statement” as “(1) an oral or written assertion or (2) nonverbal conduct of a person, if it is intended by the person as an assertion.” The written assertions in State’s Exhibit 56 are most certainly statements, and *Stahl* most certainly applies to those statements. *Stahl* cannot be ignored in this case.

{¶ 104} The majority instead attempts to rely on *State v. Craig*, 110 Ohio St.3d 306, 2006-Ohio-4571, 853 N.E.2d 621, a case that predates *Stahl*. In *Craig*, this court considered the admissibility of an autopsy report prepared by a doctor who was no longer affiliated with the medical-examiner’s office. In *Craig*, Dr. Lisa Kohler, the Summit County medical examiner at the time of the trial, testified about a murder victim’s autopsy even though another doctor, who had retired prior to the trial, had actually performed the autopsy. Dr. Kohler testified that she had reviewed all the materials prepared in connection with the autopsy, but the defense objected to her testimony, arguing that she lacked firsthand knowledge of the autopsy. Id. at ¶ 73. Dr. Kohler provided her own expert testimony on the cause and time of death, **762 and the trial court admitted the autopsy report into evidence.

{¶ 105} This court held in *Craig* that Kohler’s testimony and the admission of the autopsy report into evidence did not violate the defendant’s rights under the Confrontation Clause. The court adopted “the majority view under *Crawford* * * * that autopsy records are admissible as nontestimonial business records,” and held that “Dr. Kohler’s expert testimony about the autopsy findings, the test results, and her opinion about the cause of death did not violate Craig’s confrontation rights.” *Craig*, 110 Ohio St.3d 306, 2006-Ohio-4571, 853 N.E.2d 621, ¶ 88.

{¶ 106} We called the autopsy report in *Craig* “the ‘quintessential business record’ ” and found that “ ‘such records or statements are not testimonial in nature because they are prepared in the ordinary course of regularly conducted business and are “by their nature” not prepared for litigation.’ ” Id. at ¶ 82, quoting *People v. Durio* (2005), 7 Misc.3d 729, 734, 794 N.Y.S.2d 863. Although *390 this court used the term “business records,” our determination that the autopsy report was *nontestimonial* was the key holding in *Craig*.

{¶ 107} The Confrontation Clause “applies to ‘witnesses’ *against the accused*.” (Emphasis added.) *Crawford*, 541 U.S. at 51, 124 S.Ct. 1354, 158 L.Ed.2d 177. A coroner is concerned with how the decedent died rather than who may have killed him. Thus, the coroner is not a “witness” against a specific person when he or she prepares a report from an autopsy. A coroner’s report is not done at the behest of the prosecution in preparation for litigation; it is done pursuant to statute. See R.C. 313.131(B).

{¶ 108} That is in contrast with the DNA reports in this case. BCI is an arm of law enforcement, a statutorily created bureau within the office of the attorney general. R.C. 109.51. BCI is called upon by the General Assembly to “aid law enforcement officers in solving crimes and controlling criminal activity.” R.C. 109.52. The lab work in this case was performed at the behest of the prosecutor. Lab personnel interacted with the prosecutor’s office regarding how to proceed with the case. In performing the tests, lab personnel were attempting to prove the involvement of Crager. Among the items tested were Crager’s articles of clothing. The lab personnel objectively had to believe that their findings would be used at trial against a known defendant. That they were performing their normal business activities in producing the reports does not make their reports nontestimonial. The reports were prepared in

anticipation of litigation and are thus testimonial under *Stahl*.

{¶ 109} Whether evidence fits or does not fit into a hearsay exception such as the business-records exception is not relevant for Confrontation Clause purposes. The key question is whether the evidence is testimonial, that is, whether an objective witness would reasonably believe that a statement would be used at trial. A business record from a telephone company does not require an opportunity for cross-examination, because those records are not generated in order to be used in criminal prosecutions. They do not implicate the Confrontation Clause not because of the label “business records” but because of their character. To label something a business record when it catalogues the activity of an entity like BCI, whose business is analyzing evidence in pursuit of convictions, does not remove that record from the purview of the Confrontation Clause. “When a laboratory report is created for the purpose of prosecuting a criminal defendant, * * * it is testimonial.” *State v. March* (Mo.2007), 216 S.W.3d 663, 667. In ****763** *March*, the court found that the Confrontation Clause was violated when the analyst who identified a substance as cocaine in a drug case did not testify regarding his report. The prosecution instead called a records custodian to testify about the report. The court in *State v. Caulfield* (Minn.2006), 722 N.W.2d 304, similarly held that a drug report prepared by a bureau of criminal investigations***391** was testimonial. In *Las Vegas v. Walsh* (2005), 121 Nev. 899, 124 P.3d 203, the court held that an affidavit prepared for use at trial is testimonial. That case involved an affidavit from a nurse who drew blood from a defendant for a blood-alcohol test.

{¶ 110} Finding that DNA reports are testimonial in this case would not create an unnecessary practical hardship for the state in future cases. Although the reports admitted into evidence in this case contained the signature of Duvall alone, the practical reality of a DNA analysis is that it represents the work of more than one person. As Wiechman testified, the protocol in place at BCI required input from two analysts and a supervisor on every DNA report. One analyst performs the tests, a second reviews the results, and a supervisor reviews them again. Since more than one person is responsible for the production of a DNA report, more than one person can testify as to the contents of a report.

{¶ 111} In *State v. Williams* (2002), 253 Wis.2d 99, 644 N.W.2d 919, the Wisconsin Supreme Court considered the trial court’s admission of testimony regarding lab-test results indicating that a substance the defendant possessed was cocaine. The analyst who conducted the tests determining that the substance was cocaine did not testify, but a unit leader in the drug-identification section of the crime lab who had performed the peer review of those tests did testify. The court held that “the presence and availability for cross-examination of a highly qualified witness, who is familiar with the procedures at hand, supervises or reviews the work of the testing analyst, and renders her own expert opinion is sufficient to protect a defendant’s right to confrontation, despite the fact that the expert was not the person who performed the mechanics of the original tests.” *Williams* at 114, 644 N.W.2d 919.

{¶ 112} To satisfy the defendant’s confrontation rights, the testifying witness must be actively involved in the preparation of the report he is testifying about:

{¶ 113} “The right to confrontation is not satisfied when the government produces a witness who does nothing but summarize out-of-court statements and opinions made by others. [*United States v. Lawson* (C.A.7, 1981), 653 F.2d 299, 302].

{¶ 114} “The critical point illustrated by *Lawson* is the distinction between an expert who forms an opinion based in part on the work of others and an expert who merely summarizes the work of others. In short, one expert cannot act as a mere conduit for the opinion of another.” *Williams*, 253 Wis.2d at 113, 644 N.W.2d 919.

{¶ 115} Here, Wiechman played no role in the development of the DNA analysis introduced as State’s Exhibit 56. He was not the lead analyst, he did not perform the technical review, and he did not perform a supervisory role. Had he ***392** filled any of those roles for State’s Exhibit 56, he could have testified and not affected Crager’s rights under the Confrontation Clause.

{¶ 116} The majority states that had Duvall testified instead of Wiechman, her testimony would have been “very similar, if not identical, to Wiechman’s.” Certainly, Wiechman was very familiar with reports like State’s Exhibit 56, which are ****764** routinely produced by respected laboratories every day. But courts must take care not to assume reliability, and thus admissibility, based upon the source of the report: “Dispensing with confrontation because testimony is obviously reliable is akin to dispensing with jury trial because a defendant is obviously guilty. This is not what the Sixth Amendment prescribes.” *Crawford*, 541 U.S. at 62, 124 S.Ct. 1354, 158 L.Ed.2d 177. A focus on presumed reliability of reports is a remnant of *Roberts*. As the court said in *Crawford*:

{¶ 117} “To be sure, the Clause’s ultimate goal is to ensure reliability of evidence, but it is a procedural rather than a substantive guarantee. It commands, not that evidence be reliable, but that reliability be assessed in a particular manner: by testing in the crucible of cross-examination.” *Id.* at 61, 124 S.Ct. 1354, 158 L.Ed.2d 177.

{¶ 118} The lab report conclusively identified Boyd’s blood on Crager’s shirt. That report was admitted into evidence. That report was not Wiechman’s work, and the report does not become admissible simply because Wiechman read from it: “[W]e do not think it conceivable that the protections of the Confrontation Clause can readily be evaded by having a note-taking policeman recite the unsworn hearsay testimony of the declarant, instead of having the declarant sign a deposition.” (Emphasis sic.) *Davis v. Washington* (2006), 547 U.S. 813, 826, 126 S.Ct. 2266, 2276, 165 L.Ed.2d 224.

{¶ 119} The majority makes much of the California Supreme Court’s holding in *People v. Geier* (2007), 41 Cal.4th 555, 61 Cal.Rptr.3d 580, 161 P.3d 104. *Geier* differs from this case in important aspects. First, the California Supreme Court is not duty-bound to follow this court’s precedent, specifically this court’s recent syllabus holding in *Stahl* that “[f]or Confrontation Clause purposes, a testimonial statement includes one made ‘under circumstances which would lead an objective witness reasonably to believe that the statement would be available for use at a later trial.’” *Stahl*, 111 Ohio St.3d 186, 2006-Ohio-5482, 855 N.E.2d 834, at paragraph one of the syllabus, quoting *Crawford*, 541 U.S. at 52, 124 S.Ct. 1354, 158 L.Ed.2d 177.

{¶ 120} Second, *Geier* is the result of an entirely different factual scenario. In *Geier*, Dr. Cotton, the testifying witness, was a laboratory director for Cellmark, “a private, for-profit company that performs DNA testing in paternity and criminal cases.” *Id.* at 594, 61 Cal.Rptr.3d 580, 161 P.3d 104. Cotton did not conduct the DNA analysis herself, but was the supervisor of the person who *393 analyzed the DNA samples, and Cotton cosigned the DNA report as well as two follow-up letters to the law-enforcement agency involved in the case. *Id.* at 596, 61 Cal.Rptr.3d 580, 161 P.3d 104. Further, the *Geier* court relied on the fact that the match found between the defendant’s DNA and DNA taken from the victim—that is, the core accusation against the defendant—was the work of Cotton, not the analyst:

{¶ 121} “[T]o the extent [that the analyst’s] notes, forms and report merely recount the procedures she used to analyze the DNA samples, they are not themselves accusatory, as DNA analysis can lead to either incriminatory or exculpatory results. * * * [T]he accusatory opinions in this case—that defendant’s DNA matched that taken from the victim’s vagina and that such a result was very unlikely unless defendant was the donor—were reached and conveyed not through the nontestifying technician’s laboratory notes and report, but by the testifying witness, Dr. **765 Cotton.” *Id.* at 607, 61 Cal.Rptr.3d 580, 161 P.3d 104.

{¶ 122} In contrast, the trial court here admitted the DNA report prepared by the nontestifying witness, Duvall, and that report contained the damning accusatory opinion that Boyd’s blood was on Crager’s shirt. This case is thus entirely factually distinguishable from *Geier*.

{¶ 123} This case also differs from another case cited by the majority, *State v. Forte* (2006), 360 N.C. 427, 629 S.E.2d 137, which presents a “cold case” scenario not present in this case. In *Forte*, DNA from victims of an unknown assailant was collected and analyzed in 1990 by a State Bureau of Investigation agent, D.J. Spittle. In 2001, the defendant’s DNA, recorded in a database during the 1990s, was matched with the DNA Spittle had analyzed in 1990. Spittle was unavailable to testify at the defendant’s trial, but his supervisor introduced Spittle’s reports into evidence. The *Forte* court found that the reports, containing the results of Spittle’s objective analysis of the evidence, along with routine chain of custody information, “[did] not bear witness against [the] defendant.” *Forte*, 360 N.C. at 435, 629 S.E.2d 137. The court found that “[a]lthough * * * the reports were prepared with the understanding that eventual use in court was possible or even probable, they were not prepared exclusively for trial and Agent Spittle had no interest in the outcome of any trial in which the records might be used.” *Id.* Here, unlike in *Forte*, the DNA report was created for the purpose of prosecuting a known defendant.

{¶ 124} Since Wiechman was involved in no way in the preparation of State’s Exhibit 56, and since neither the actual preparer, nor the technical reviewer, nor the supervisor testified, Crager was not able to conduct a meaningful cross-examination of a person responsible for the preparation of the report that was *394 ultimately admitted into evidence. Thus, Crager’s rights under the Confrontation Clause were violated.

MOYER, C.J., concurs in the foregoing opinion.

United States Court of Appeals,
Seventh Circuit.
UNITED STATES of America, Plaintiff-Appellee,
v.
Danny TURNER, Defendant-Appellant.

No. 08-3109.
Argued May 14, 2009.
Decided Jan. 12, 2010.

*930 VAN BOKKELEN, District Judge.

Danny Turner was convicted by a jury of three counts of dealing crack cocaine. The district court sentenced him to 210 months of imprisonment on each count, to be served concurrently. Turner appeals, arguing that the district court should not have allowed a chemist to testify at trial about the nature of the drug exhibits because the chemist did not himself test those exhibits. Turner also believes that the district court should not have admitted the drugs into evidence because the government did not establish a proper chain of custody. We conclude that the district court was correct in both instances, and we affirm its judgment.

I. Background

In early 2008, Dane County Narcotics and Gang Task Force officers learned that Danny Turner was selling crack cocaine in Madison, Wisconsin. On January 17, 2008, undercover officer Kim Meyer purchased crack cocaine from Turner, and again on January 25 and February 12. After the February 12 purchase, officers arrested Turner. A week later, a federal grand jury in the Western District of Wisconsin indicted Turner on three counts of distributing cocaine base (crack cocaine), in violation of 21 U.S.C. § 841(a)(1).

At the pretrial motion hearing, the district court set a May 5, 2008, deadline for government's disclosure of expert witnesses. On May 1, the government notified Turner that it intended to call as an expert witness Amanda Hanson, an analyst at the Wisconsin State Crime Laboratory, regarding the weight and identification of the drugs alleged in the Indictment. Hanson was the chemist who analyzed the substances the undercover agent purchased from Turner. On May 8, however, the government advised Turner that it would instead be calling a different expert witness—Hanson's supervisor, Robert Block—because Hanson was on maternity leave. Block is a senior forensic chemist and head of the drug identification unit at the crime laboratory in Madison.

On May 12, Turner moved in limine to exclude Block's expert testimony. Turner argued that Block's testimony, in lieu of Hanson's testimony, would violate the Confrontation Clause of the Sixth Amendment to the United States Constitution. The government objected to the motion and, in turn, assured the district court that Block would testify about his own conclusions, not Hanson's, about the nature of the substances she tested. The district court denied Turner's motion.

At trial, the government called Block as its expert witness to identify the substances the undercover officer bought from Turner. Among other things, Block testified about the crime lab's procedures for processing and testing the evidence. Block described the safeguards used by the lab to prevent the commingling and tampering of evidence. He testified that the instruments at the lab are calibrated each day that they are used and that blank samples are run between each test to avoid contamination or carryover from previous testing.

Block also explained how suspected substances are tested through gas chromatography, mass spectrometry, and infrared spectroscopy to generate graph data in order to determine the type of drug involved:

The gas chromatography will print out a set of peaks that would be indicative of the presence of a drug or a standard that is run on that instrument for comparison purposes. The mass spectrometer will print out a spectrum for a drug that has been extracted. This is a specific test. By specific, it means the results that are generated are unique *931 to that drug and no others. Likewise the spectrum that is produced in the infrared spectroscopy will

generate a spectrum, and again, this is the second specific test, the results of which are specific to each and every individual drug.

(Def.'s Appendix at 26.)

In addition, Block described how each chemist's analysis must undergo a peer review, and that, as the unit head, he peer-reviewed Hanson's tests in this case:

Prior to the report leaving the laboratory, every report must undergo a peer review by another qualified analyst within the unit. As the unit head, I perform the peer review of the other analysts within the drug identification section. I reviewed this report that Amanda Hanson generated for the analysis of the chunky material in Exhibits 1, 2, and 3, reviewing the handwritten notes and the generated data, and came to the same conclusion based on the information provided that each of these items contained the same material and I signed off on that peer review.

(Def.'s Appendix at 22.)

Ultimately, Block testified that the substances tested by Hanson-introduced at trial as Exhibits 1, 2, and 3- contained cocaine base:

Q. So are you able-were you able to form an opinion as to the nature of the substance in those three exhibits?

A. Yes, I was.

Q. And what's your opinion?

A. My opinion based upon the examinations that were performed on the chunky materials within Exhibits 1, 2, and 3, along with my experience, is that each of these items in 1, 2, and 3 contain cocaine base.

(*Id.*)

Neither Hanson's lab report, nor her notes, nor the data charts were introduced into evidence.

At the close of the government's case, Turner moved for a directed verdict. He argued that the government had not established a sufficient chain of custody to prove that the drugs tested were the same substances the undercover agent purchased from him. The district court denied Turner's motion.

Turner chose not to present any evidence. After closing arguments, the jury returned guilty verdicts on all three counts of the indictment. The district court sentenced Turner as a career offender to 210 months of imprisonment on each count of the Indictment, to be served concurrently.

II. Analysis

A. *Issues for Appeal*

Turner's appeal raises two issues:

1. Whether the district court violated his Sixth Amendment right to confront Hanson, the forensic chemist who tested the drugs; and
2. Whether the district court abused its discretion by admitting the drugs into evidence without Hanson's testimony as to how she handled the drugs during the testing.

B. *The Sixth Amendment*

Turner argues that the district court violated his Sixth Amendment right to confrontation by permitting Block to

testify about Hanson's tests. Turner claims that Hanson's notes, machine test results, and her final report were testimonial in nature and that Block's reliance of these materials violated his right to confront a witness *932 because the government had not demonstrated that Hanson was unavailable for trial. Turner insists that our decision in *United States v. Moon*, 512 F.3d 359 (7th Cir.2008), mandates that his conviction be vacated.

[1] “We review evidentiary rulings implicating a defendant's Sixth Amendment right to confrontation de novo.” *United States v. Burgos*, 539 F.3d 641, 643 (7th Cir.2008). If any error is to be found, “an otherwise-valid conviction should not be set aside if the constitutional error was harmless beyond a reasonable doubt.” *Id.* (citing *Chapman v. California*, 386 U.S. 18, 24, 87 S.Ct. 824, 17 L.Ed.2d 705 (1967)).

[2] The Sixth Amendment guarantees that “[i]n all criminal prosecutions, the accused shall enjoy the right ... to be confronted with the witnesses against him.” U.S. Const. Amend. VI. Accordingly, the government may not introduce into evidence “testimonial statements of a witness who did not appear at trial unless he was unavailable to testify, and the defendant had had a prior opportunity for cross-examination.” *Crawford v. Washington*, 541 U.S. 36, 53-54, 124 S.Ct. 1354, 158 L.Ed.2d 177 (2004). “The critical inquiry is whether the statements in question are ‘testimonial’-because, as the [Supreme] Court held, it is only that type of statement that makes a declarant a ‘witness’ under the Confrontation Clause.” *Burgos*, 539 F.3d 641, 643 (7th Cir.2008) (quoting *Crawford*, 541 U.S. at 51, 124 S.Ct. 1354).

[3] Therefore, we must first determine if the government introduced any statements from Hanson that were testimonial, without first demonstrating that she was unavailable for trial and without giving Turner an opportunity to cross-examine her. No such problem exists. With the exception of Block's passing comment-which we address below-that having peer-reviewed Hanson's analysis, he reached the same conclusion as Hanson about the nature of the exhibits; nothing from Hanson's notes, machine test results, or her final report was introduced into evidence. Accordingly, we are faced with a similar situation as in *Moon* where the government's expert witness was properly allowed to rely on the information gathered and produced by a lab employee who did not testify at trial.

In *Moon*, a DEA chemist testified at trial that the substance seized from the defendant was cocaine. The chemist did not perform the tests himself. Instead, the lab work had been done by another employee who left the agency three weeks before trial. The chemist based his testimony on the output of an infrared spectrometer and a gas chromatograph as well as the employee's report and lab notes. In addition, the government entered into evidence, without an objection, the employee's report, which contained both the readings taken from the instruments and his own conclusion that those readings meant the tested substance was cocaine. *Moon*, 512 F.3d at 362. On appeal, the defendant challenged the district court's admission of the employee's report.

We found that there was no problem with the chemist's testimony because

[h]e testified as an expert, not as a fact witness. When the expert testifies, “the facts or data need not be admissible in evidence in order for the opinion or inference to be admitted.” Fed.R.Evid. 703. So if the Confrontation Clause precludes admitting [the employee's] report, this does not spoil [the chemist's] testimony.

Id. at 361. We also held that instrument readouts were not “statements” and, thus, could not be testimonial. *Id.* at 362.

*933 [4] Likewise, we see no problem with Block's expert testimony, especially in light of the fact that Hanson's summaries, which contained some testimonial statements, were not admitted into evidence. Turner's contention that Block could not rely on Hanson's work product has no support in law: “the Sixth Amendment does not demand that a chemist or other testifying expert have done the lab work himself.” *Id.*

[5] Turner further argues that the district court violated his rights under the Sixth Amendment confrontation clause when it allowed Block to testify that his conclusions about Exhibits 1, 2, and 3 were the same as Hanson's. Turner points to language in *Moon* that, while the expert was entitled to analyze the data gathered by the lab employee who tested the drugs, the employee's “own conclusions based on the data should have been kept out of evidence (as doubtless they would have been, had defendant objected).” *Id.*

But in this regard *Moon* is different from Turner's case. The expert witness in *Moon* was not involved in the testing process of the suspected substances: he was strictly an expert witness. Block, on the other hand, was the laboratory supervisor whose job was to personally check Hanson's test results. As such, he could testify about his personal involvement in the testing process, about the accuracy of the tests, and about agreeing with Hanson when he signed off on her report. What is more, Block's testimony unequivocally establishes that his opinion about Exhibits 1, 2, and 3 was his own:

Q. So are you able-were you able to form an opinion as to the nature of the substance in those three exhibits?

A. I was.

Q. My opinion based upon the examinations that were performed on the chunky materials within Exhibits 1, 2, and 3, along with my experience, is that each of these items in 1, 2, and 3 contain cocaine base.
(Def.'s Appendix at 22.)

[6] Yet, even if it had been an error for Block to describe how the peer review process applied in this case, the error would have been harmless under any standard. Block's statement was a passing reference to Hanson in the context of explaining the procedures for processing and testing the evidence at the laboratory. This was not a case of trying to introduce Hanson's opinion through the back door or to bolster her conclusion in order to make Block's own opinion more believable. Therefore, Turner's reliance on *United States v. Cuong*, 18 F.3d 1132 (4th Cir.1994), is misplaced.

In *Cuong*, the defendant, a doctor, was charged with illegally prescribing painkillers. The government called an expert witness to testify about the defendant's practice of prescribing the drugs. The expert testified that in his opinion the drugs were medically unnecessary and that his findings "were essentially the same" as the findings of his close friend, Dr. Stevenson, who "is also a lawyer, and ... is well thought of in Northern Virginia," and who "has been president of Medical Society." *Id.* at 1143. The defendant objected to the expert's testimony about Dr. Stevenson but the judge let it in.

The Fourth Circuit reversed the district court because "the defendant [was] subjected to the testimony of a witness whom he may not cross-examine, and [the expert witness] bolstered his testimony by claiming that an outstanding doctor, who is also a lawyer and president of the Medical Society, agrees with him." *Id.*

Unlike in *Cuong*, the qualifications of Hanson-the testing scientist-were not *934 put before the jury. And the brief mention of her conclusion was made in reference to explaining how the peer review process works at the laboratory:

Prior to the report leaving the laboratory, every report must undergo a peer review by another qualified analyst within the unit. As the unit head, I perform the peer review of the other analysts within the drug identification section. I reviewed this report that Amanda Hanson generated for the analysis of the chunky material in Exhibits 1, 2, and 3, reviewing the handwritten notes and the generated data, and came to the same conclusion based on the information provided that each of these items contained the same material and I signed off on that peer review.
(Def.'s Appendix at 22.)

Accordingly, we find that, even if it was an error for the district court to allow Block to state that his opinion was the same as Hanson's, the error was harmless.

After the oral argument in this case, the Supreme Court of the United States decided *Melendez-Diaz v. Massachusetts*, --- U.S. ---, 129 S.Ct. 2527, 174 L.Ed.2d 314 (2009). In *Melendez-Diaz*, the prosecution introduced certificates of analysis as a substitute for in-court testimony to show that the substance recovered from the defendant was cocaine. "The certificates were sworn to before a notary public by analysts at the State Laboratory Institute of the Massachusetts Department of Public Health." *Id.* at 2531. The Supreme Court held that the certificates were testimonial statements and the prosecution could not prove its case without first showing that a witness was

unavailable and that the defendant had had an opportunity to cross-examine him.

Turner submitted a supplemental brief, claiming that *Melendez-Diaz* stands for the proposition that he should have been able to confront Hanson on the witness stand. Turner's argument is faulty. In writing for the Court, Justice Scalia explicitly stated that “we do not hold, and it is not the case, that anyone whose testimony may be relevant in establishing the chain of custody, authenticity of the sample, or accuracy of the testing device, must appear in person as part of the prosecution's case.” *Id.* at 2532 n. 1. Moreover, *Melendez-Diaz* did not do away with Federal Rule of Evidence 703. And most importantly, unlike in *Melendez-Diaz*, Hanson's report was not admitted into evidence, let alone presented to the jury in the form of a sworn affidavit, “functionally identical to live, in-court testimony, doing ‘precisely what a witness does on direct examination,’ ” *id.* at 2532. Instead, Block testified as an expert witness presenting his own conclusions about the substances in question to the jury. Accordingly, *Melendez-Diaz* does not control this case.

C. Chain of Custody

[7] Turner argues that the district court abused its discretion in admitting Exhibits 1, 2, and 3 into evidence even though the government did not present any witness who had personal knowledge of Hanson's handling and testing of the substances the undercover officer bought from him. He contends that nothing is known about how Hanson handled the drugs, whether she followed appropriate procedures or tampered with the evidence. Turner thus argues that there is a gaping hole in the chain of custody which makes the evidence inherently unreliable and requires that his conviction be vacated. Turner suggests that the presumption of regularity does not apply in testing suspected substances because the job of a laboratory chemist is “exceptionally complex and often prone to error, bias, and prejudice.” (Appellant's Br. at 33.)

*935 [8] We review the district court's evidentiary rulings, including matters concerning chain of custody for physical exhibits, under the abuse of discretion standard. *United States v. Prieto*, 549 F.3d 513, 524 (7th Cir.2008). We will not reverse a trial judge unless the record contains no evidence on which the trial court could have rationally based its decision. *United States v. Tatum*, 548 F.3d 584, 587 (7th Cir.2008).

As we have stated before, the government is not required to call every witness who handled an exhibit before that exhibit may be admitted into evidence:

The standard for the admission of exhibits into evidence is that there must be a showing that the physical exhibit being offered is in substantially the same condition as when the crime was committed. In making this determination, the district court makes a “presumption of regularity,” presuming that the government officials who had custody of the exhibits discharged their duties properly. The chain of custody need not be perfect; gaps in the chain go to the weight of the evidence, not its admissibility. In addition, the government does not have to exclude all possibilities of tampering with the evidence. Instead, the government need only show that it took reasonable precautions to preserve the original condition of the evidence.

United States v. Prieto, 549 F.3d 513, 524-25 (7th Cir.2008) (citations and quotation marks omitted).

Because the substances purchased from Turner remained in official custody at all times, the presumption of regularity applies. Turner presents no case law to the contrary, and we find no compelling reason to do away with this principle in the context of laboratory testing. Turner only speculates that Hanson might have tampered with the evidence, but speculation is not enough to reverse the district court's evidentiary ruling. Moreover, Detective Hughes testified at trial that the drugs appeared to be in substantially the same condition as when he received them from Officer Meyer. Finding no error in the district court's decision to allow Exhibits 1, 2, and 3 into evidence, we decline Turner's request to vacate his conviction.

III. Conclusion

Because we find that the district court did not commit error in allowing Block's testimony at Turner's trial and did not abuse its discretion in admitting into evidence Exhibits 1, 2, and 3, we affirm the judgment of the district court.

AFFIRMED.

Supreme Court of Indiana.
Richard PENDERGRASS, Appellant (Defendant below),
v.
STATE of Indiana, Appellee (Plaintiff below).

No. 71S03-0808-CR-00445.
Sept. 24, 2009.

SHEPARD, Chief Justice.

Richard Pendergrass was convicted of two counts of child molesting based in part *704 on DNA evidence showing he was very likely the father of the victim's aborted fetus. The State's witnesses to this effect were a laboratory supervisor with direct knowledge of the processing of the samples and an expert DNA analyst who used the laboratory's print-outs to render an opinion. Pendergrass contends his rights under the Confrontation Clause were violated because the State did not present the technician who ran the samples through the laboratory's equipment. We conclude that the proof submitted was consistent with the Sixth Amendment as recently detailed in *Melendez-Diaz v. Massachusetts*.

Facts and Procedural History

This case commenced when the State charged Richard Pendergrass with two counts of child molesting, class A felonies. Ind.Code § 35-42-4-3 (2007).

At trial, C.D., Pendergrass's daughter, testified that he had started touching her inappropriately when she was eleven years old. At age thirteen, when she began to feel ill, Pendergrass took her to the doctor, who told them she was pregnant. C.D. told her mother of her pregnancy and its cause, and C.D.'s mother then reported Pendergrass to the police. Soon after, C.D. had an abortion.

Two witnesses testified at trial concerning DNA evidence demonstrating the likelihood that Pendergrass was the father of the fetus. Lisa Black, a supervisor at the Indiana State Police Laboratory, explained the process of test sampling for DNA. (Tr. at 120-97.) Dr. Michael Conneally, a DNA expert who performed the paternity analysis, explained how he came to his conclusions regarding the likelihood that Pendergrass was the father of the aborted fetus. (Tr. at 209-52.) During the testimony given by Black and Conneally, the State presented three documents, two prepared by the Indiana State Police Laboratory in Lowell, Indiana, and one prepared by Conneally. Pendergrass objected to admitting these documents, insisting on Confrontation Clause and hearsay grounds that the State must call the analyst who performed the test in the laboratory. Over Pendergrass's objection the court admitted these documents into evidence.

Exhibit 1 was labeled "Certificate of Analysis," prepared by Daun Powers, a forensic DNA analyst at the Lowell laboratory, and admitted during Black's testimony. This document consisted of an inventory of physical evidence submitted to the lab, a list of the tests performed, and indications of where the evidence and the test results were sent. It did not contain any test results or conclusions. (App. at 6-7.)

Exhibit 2, also admitted while Black was on the stand, was a table of the test results titled "Profiles for Paternity Analysis" and compiled by Powers. (App. at 8; Tr. at 176.) This table did not contain conclusions about paternity, just numbers in columns categorized by abbreviated test labels for each of the three test subjects: Pendergrass, C.D., and the aborted fetus. (App. at 8.)

Black had reviewed Exhibit 2 in the original course of the State Police Laboratory's work. (Tr. at 179-80.) In Black's role as supervisor she performs technical, administrative, and random reviews of the work of DNA analysts at the Lowell and Ft. Wayne laboratories. All DNA case work is reviewed by a second qualified analyst. Black performs some of these technical reviews and all of the other reviews. She performed the technical review of Powers's tests on the evidence at issue in this case. (Tr. at 126-27, 131, 179-81.) Her initials appear next to each of the three samples on the DNA profile, indicating she "confirmed that this paperwork that Ms. Powers was providing

to Dr. Conneally was an accurate representation*705 of her results.” (App. at 8, Tr. at 179-80.) On the stand Black described the steps Powers took to develop the DNA profiles for each of the three samples. (Tr. at 127.) She described what types of samples were taken from the three subjects based on Powers's notes. (Tr. at 140-42.)

Black testified about the general procedures followed at the laboratory, including receiving, storing, and testing evidence. (Tr. at 126-30, 138-40, 153-55.) Throughout Black's testimony, it was plain enough that Powers had performed the original laboratory processing and that Black had supervised and checked her work. (Tr. at 120-97.) For example, when asked which test was performed first, Black replied, “I don't have any knowledge of that.” (Tr. at 153.) She sometimes relied on Powers's notes for her testimony about the specific tests performed. (Tr. at 140-42.) For example, when asked if anything indicated a difficulty in creating the DNA profile, Black looked to Powers's notes, which were not admitted into evidence. (Tr. at 140-42.) She had not reviewed most of Powers's notes for trial. (Tr. at 145-46.)

During Conneally's testimony the court admitted Exhibit 3, a paternity index table that Conneally created. (Tr. at 217, 222.) Conneally used the index to calculate the probability that Pendergrass was the father of the fetus based on the laboratory's test results. (Tr. at 214, 216, 222.) Given the paternity index results, there was a 99.9999 percent likelihood that Pendergrass was the father of the fetus that C.D. aborted, or, in other words, Pendergrass was 2.8 million times more likely to be the father than a random man. (Tr. at 215-26.)

The jury returned guilty verdicts on both counts. The trial court sentenced Pendergrass to consecutive terms of 40 years on Count I and 25 years on Count II. (App. at 3.) The Court of Appeals affirmed. *Pendergrass v. State*, 889 N.E.2d 861 (Ind.Ct.App.2008). We granted transfer. 898 N.E.2d 1219 (Ind.2008) (table).

I. Pendergrass Was Not Denied His Right of Confrontation.

[1] The Sixth Amendment to the United States Constitution, made applicable to the States via the Fourteenth Amendment, states: “In all criminal prosecutions, the accused shall enjoy the right ... to be confronted with the witnesses against him.” U.S. Const. amend. VI. A witness's testimony against a defendant is thus inadmissible unless the witness appears at trial or, if the witness is unavailable, the defendant had a prior opportunity for cross-examination. *Crawford v. Washington*, 541 U.S. 36, 124 S.Ct. 1354, 158 L.Ed.2d 177 (2004).

Crawford overturned the rule announced in *Ohio v. Roberts*, 448 U.S. 56, 72, 100 S.Ct. 2531, 65 L.Ed.2d 597 (1980), which permitted hearsay statements as long as they bore what the *Roberts* opinion described as the “indicia of reliability.” *Crawford*, 541 U.S. at 68, 124 S.Ct. 1354. *Crawford* dispensed with this substantive understanding of the Confrontation Clause in favor of a procedural one, stating,

To be sure, the Clause's ultimate goal is to ensure reliability of evidence, but it is a procedural rather than a substantive guarantee. It commands, not that evidence be reliable, but that reliability be assessed in a particular manner: by testing in the crucible of cross-examination.... Dispensing with confrontation because testimony is obviously reliable is akin to dispensing with jury trial because a defendant is obviously guilty. This is not what the Sixth Amendment prescribes.

541 U.S. at 61-62, 124 S.Ct. 1354.

In determining the types of evidence to which the Confrontation Clause applies, *706 *Crawford* turned to definitions of language from the text itself: “It applies to ‘witnesses’ against the accused—in other words, those who ‘bear testimony.’ ‘Testimony,’ in turn, is typically ‘[a] solemn declaration or affirmation made for the purpose of establishing or proving some fact.’” *Crawford*, 541 U.S. at 51, 124 S.Ct. 1354, (quoting 2 N. Webster, *An American Dictionary of the English Language* (1828)).

“Where testimonial statements are at issue, the only indicium of reliability sufficient to satisfy constitutional demands is the one the Constitution actually prescribes: confrontation.” *Crawford*, 541 U.S. at 68-69, 124 S.Ct. 1354. While the *Crawford* court intentionally refrained from defining what evidence is “testimonial,” it listed three “formulations of this core class of ‘testimonial’ statements”:

(1) *ex parte* in-court testimony or its functional equivalent—that is, material such as affidavits, custodial examinations, prior testimony that the defendant was unable to cross-examine, or similar pretrial statements that

declarants would reasonably expect to be used prosecutorially;
(2) extrajudicial statements ... contained in formalized testimonial materials, such as affidavits, depositions, prior testimony, or confessions;
(3) statements that were made under circumstances which would lead an objective witness reasonably to believe that the statement would be available for use at a later trial.

Crawford, 541 U.S. at 51-52, 124 S.Ct. 1354 (numbers added).

Crawford emphasized that the Sixth Amendment's very essence is to protect against abuses of government officials. "Involvement of government officers in the production of testimony with an eye toward trial presents unique potential for prosecutorial abuse—a fact borne out time and again throughout a history with which the Framers were keenly familiar." *Crawford*, 541 U.S. at 56 n. 7, 124 S.Ct. 1354. The opinion later claimed that the "Framers would be astounded to learn that *ex parte* testimony could be admitted against a criminal defendant because it was elicited by 'neutral' government officers." *Crawford*, 541 U.S. at 66, 124 S.Ct. 1354.

Therefore, says *Crawford*, the text, taken with traditional exceptions, means that the Sixth Amendment does not permit the admission of "testimonial" statements of a witness who does not appear at trial unless he or she is unavailable to testify and the defendant had a prior opportunity for cross-examination. *Crawford*, 541 U.S. at 53-54, 124 S.Ct. 1354.

Since *Crawford*, the Supreme Court has clarified incrementally the definition of "testimonial." It first excluded from "testimonial" statements whose primary purpose is to enable police assistance but not statements made to police during an investigation. *Davis v. Washington*, 547 U.S. 813, 126 S.Ct. 2266, 165 L.Ed.2d 224 (2006). *Davis* clarified that the testimonial statements are those that are substitutes for live testimony, that is "they do precisely what a witness does on direct examination ..." *Davis*, 547 U.S. at 830, 126 S.Ct. 2266. Because "[n]o 'witness' goes into court to proclaim an emergency and seek help," statements seeking help during an emergency do not classify as "testimonial." *Davis*, 547 U.S. at 828, 126 S.Ct. 2266. By contrast, in the companion case to *Davis*, *Hammon v. Indiana*,^{FN1} where the prosecution sought to enter an affidavit by the alleged victim based on *707 conversations with the police in their investigation, the Confrontation Clause barred admission because the officer was seeking to find out "what happened," not "what is happening." *Davis*, 547 U.S. at 830, 126 S.Ct. 2266.

FN1. Decided here as *Hammon v. State*, 829 N.E.2d 444 (Ind.2005).

The more recent and most relevant for our purposes is *Melendez-Diaz v. Massachusetts*, --- U.S. ---, 129 S.Ct. 2527, 174 L.Ed.2d 314 (2009), in which the defendant was convicted for drug crimes based partly on certificates of analysis stating the substance found in seized bags was cocaine of a certain weight, admitted without any live testimony either by the analyst who signed the affidavits or by anyone else. The state processes contemplated that the affidavits were to stand on their own, so no witnesses were called. *Melendez-Diaz*, 129 S.Ct. at 2531. After concluding that the certificates were "quite plainly affidavits," the Supreme Court held that the affidavits clearly fell within "testimonial" evidence because they "are functionally identical to live, in-court testimony, doing 'precisely what a witness does on direct examination,' " the analysts swearing their accuracy were "witnesses" for Sixth Amendment purposes, and the defendant was entitled to "be confronted with" the analysts at trial, absent a showing that the analysts were unavailable to testify and the defendant had a prior opportunity to cross-examine them. *Melendez-Diaz*, 129 S.Ct. at 2532 (quoting *Davis v. Washington*, 547 U.S. at 830, 126 S.Ct. 2266 (2006)).

Concluding that the certificates were the functional equivalent of live, in-court testimony, the Court pointed out that the affidavits were "made under circumstances which would lead an objective witness reasonably to believe that the statement would be available for use at a later trial." *Melendez-Diaz*, 129 S.Ct. at 2532 (quoting *Crawford*, 541 U.S. at 52, 124 S.Ct. 1354). Indeed, the sole purpose of the certificates was to provide "*prima facie* evidence of the composition, quality, and the net weight" of the substance. *Melendez-Diaz*, 129 S.Ct. at 2532 (quoting Mass. Gen. Laws, ch. 111, § 13). This purpose was reprinted on the certificates themselves. *Melendez-Diaz*, 129 S.Ct. at 2531.

The court characterized its opinion as a "rather straightforward application of our holding in *Crawford*." *Melendez-Diaz*, 129 S.Ct. at 2533. As such, we take *Melendez-Diaz* as another clarifying step, in the vein of *Davis*,

in defining the boundaries of the term “testimonial.” Following *Melendez-Diaz* we will therefore treat the Certificate of Analysis in the present case as testimonial, as it fits the definition of testimony as clarified by *Melendez-Diaz*.

[2] It is not clear whether more than one analyst signed each certificate in *Melendez-Diaz* or three different analysts signed each one. We similarly do not know whether the majority insisted that all the analysts involved in the testing should have testified at trial or if fewer than all of them would be permissible. For instance, if the tests were done jointly, it is not clear whether one who participated in the testing would be sufficient. The court gave some clue on such matters from the majority's declaration that its conclusion “does not mean that everyone who laid hands on the evidence must be called,” and that the Confrontation Clause leaves discretion with the prosecution on which evidence to present. *Melendez-Diaz*, 129 S.Ct. at 2532 n. 1. That is precisely what the prosecution did in the case before us. It chose to call the laboratory supervisor rather than the laboratory processor. The laboratory supervisor who took the stand did have a direct part in the process by personally checking Powers's test results. (Tr. at 179-80; App. at 8.) As such, she could testify as to the accuracy of the tests as well as standard operating procedure of *708 the laboratory and whether Powers diverged from these procedures.

The prosecution further chose to call an expert to interpret the test results for the jury. Thus, Pendergrass had the opportunity to confront at trial two witnesses who were directly involved in the substantive analysis, unlike *Melendez-Diaz*, who confronted none at all.

If the chief mechanism for ensuring reliability of evidence is to be cross-examination, Pendergrass had that benefit here. If there were systemic problems with the laboratory processes, Black would be a competent witness, perhaps the ideal witness, against whom to lodge such challenges. Moreover, Black had personal knowledge of the laboratory's work on the specimens at issue as the person who performed the technical review. The State's view is that such an examination of processes is precisely what occurred: “Indeed, Pendergrass effectively cross-examined Black on every step of the evidence testing process, from receipt of the samples from police, through storage, extraction, and comparison.” (Appellee's Br. at 13.) After Black left the stand, of course, the State called the expert who actually gave the opinion that the DNA of Pendergrass, C.D., and the fetus matched.

While the prosecution presented its two witnesses, Pendergrass challenges that it did not call the right-or-enough-witnesses. The justices of the Supreme Court wrestled some on this question in *Melendez-Diaz*, although the certificates in that case were not accompanied with any live testimony. 129 S.Ct. at 2531, 2532 n. 1, 2546 (Kennedy, J., dissenting). The dissent raised the specter of requiring “in-court testimony from each human link in the chain of custody.” *Melendez-Diaz*, 129 S.Ct. at 2546 (Kennedy, J., dissenting). The majority rejected this characterization of its ruling by stating that it “does not mean that everyone who laid hands on the evidence must be called.” *Melendez-Diaz*, 129 S.Ct. at 2532 n. 1.

The *Melendez-Diaz* majority described the affidavits in that case as including only a “bare-bones statement” that the substance was found to be cocaine and emphasized that the defendant “did not know what tests the analysts performed, whether those tests were routine, and whether interpreting their results required the exercise of judgment or the use of skills that the analysts may not have possessed.” *Melendez-Diaz*, 129 S.Ct. at 2537. We note that here Pendergrass complains of no such ignorance by the time of trial. In fact, his counsel was thoroughly prepared when the State sought to admit the Certificate of Analysis. (Tr. at 132-37.)

Responding to the dissenters' contention that the decision in *Melendez-Diaz* would require platoons of live witnesses to testify about everything down to and including chain of custody for tested samples, the majority insisted that it would be up to the prosecutors to choose among the many ways of proving up scientific results, as long as the way chosen featured live witnesses. *Melendez-Diaz*, 129 S.Ct. at 2532 n. 1. Here, the prosecution supplied a supervisor with direct involvement in the laboratory's technical processes and the expert who concluded that those processes demonstrated Pendergrass was the father of the aborted fetus. We conclude this sufficed for Sixth Amendment purposes.

II. Should the Exhibits Have Been Excluded as Hearsay?

[3] Pendergrass argues that the trial court improperly admitted the State's exhibits 1-3 as hearsay, and the parties exchange arguments about various subsections of Indiana Evidence Rule 803.

[4] One general rule about opinions by qualified experts is that they may rely on *709 information supplied by other persons who have supplied material which the expert regards as material, even if the supplier is not present to testify in court. Ind. Evidence Rule 703; *Ealy v. State*, 685 N.E.2d 1047, 1056 (Ind.1997) (trial court did not err by

admitting expert testimony based on a properly admitted autopsy report, even if the report had been inadmissible). Medical experts who render an opinion about an individual's mental state on the basis of multiple sources detailing treatment and observation are such an instance. *See, e.g., In re A.J.*, 877 N.E.2d 805, 814 (Ind.Ct.App.2007) (trial court did not err by admitting expert's testimony as to his treatment recommendations, which were based in part on polygraph results).

The sources upon which Conneally relied might have been subject to a limiting instruction about the purposes for which they were being tendered, but it was not error to admit them.

III. Conclusion

We affirm the trial court.

DICKSON and SULLIVAN, JJ., concur.

RUCKER, J., dissents with separate opinion in which BOEHM, J., concurs.

RUCKER, J., dissenting.

Before *Crawford v. Washington*, 541 U.S. 36, 124 S.Ct. 1354, 158 L.Ed.2d 177 (2004) as applied in the recent United States Supreme Court decision of *Melendez-Diaz v. Massachusetts*, 557 U.S. ----, 129 S.Ct. 2527, 174 L.Ed.2d 314 (2009), I would have agreed with the majority that a defendant's opportunity to cross-examine "a supervisor with direct involvement in the laboratory's technical processes ..." was sufficient to satisfy the demands of the Sixth Amendment. Op. at 708. Indeed this jurisdiction has historically admitted documents and testimony containing laboratory results from witnesses other than the experts who actually performed the tests or analyses. *See, e.g., Ealy v. State*, 685 N.E.2d 1047, 1055 (Ind.1997) (holding that an autopsy report was properly admitted under the public records exception to the hearsay rule); *Thompson v. State*, 270 Ind. 442, 386 N.E.2d 682, 684 (1979) (holding that an autopsy report was properly admitted under the business records exception to the hearsay rule although the doctor who prepared the report did not sponsor the report at trial and reasoning that the business records exception "does not mean that a sponsor of an exhibit must have personally made it, filed it, or have had first-hand knowledge of the transaction represented by it."); *Fowler v. Napier*, 663 N.E.2d 1197, 1200 (Ind.Ct.App.1996) (holding that DNA test results prepared by one doctor and presented at trial by another were properly admitted under the business records exception to the hearsay rule). However, *Melendez-Diaz* seems to point in a different direction thus casting considerable doubt on the continued validity of the foregoing authority.

To be sure *Melendez-Diaz* is not as clear as it could have been in identifying *who* must testify at trial. As the majority correctly observes, "[t]he justices of the Supreme Court wrestled some on this question..." Op. at 708. But to support its contention that the prosecutor may introduce into evidence documents prepared by the actual analyst, through a supervisor, the majority relies on certain isolated passages from the *Melendez-Diaz* opinion. For example the majority points to comments that not "everyone who laid hands on the evidence must be called" and that "the Confrontation Clause leaves discretion with the prosecution on which evidence to present." Op. at 707 (citing *Melendez-Diaz*, 129 S.Ct. at 2532 n. 1). However, these comments were directed *710 at a very narrow proposition concerning chain of custody and not the broader proposition the majority here advances.^{FN2} Indeed immediately preceding the footnoted comment on which the majority relies, the Court was unequivocal: "Absent a showing that the analysts were unavailable to testify at trial *and* that petitioner had a prior opportunity to cross-examine them, petitioner was entitled to 'be confronted with' the analysts at trial." *Id.* at 2532 (emphasis in original) (quoting *Crawford*, 541 U.S. at 54, 124 S.Ct. 1354).

FN2. The full quote follows:

Contrary to the dissent's suggestion ... we do not hold, and it is not the case, that anyone whose testimony may be relevant in establishing the chain of custody, authenticity of the sample, or accuracy of the testing device, must appear in person as part of the prosecution's case. While the dissent is correct that "[i]t is the obligation of the prosecution to establish the chain of custody," ... this does not mean that everyone who laid hands on the evidence must be called. As stated in the dissent's own quotation, ... "gaps in the chain [of custody] normally go to the weight of the evidence rather than its admissibility." It is up to the prosecution to decide what steps in the chain of custody are so crucial as to require evidence; but what testimony *is* introduced must (if the defendant objects) be introduced live. Additionally, documents prepared in the regular course of equipment maintenance may well qualify as nontestimonial records. *Melendez-Diaz*, 129 S.Ct. at 2532 n. 1 (internal citations omitted) (alteration and emphasis in original).

Also, contrasting the facts in *Melendez-Diaz* to the facts here, the majority notes that the Court described the affidavits in that case as a “bare-bones statement” and that the defendant in that case “did not know what tests the analysts performed, whether those tests were routine, and whether interpreting their results required the exercise of judgment or the use of skills that the analysts may not have possessed.” Op. at 708 (quoting *Melendez-Diaz*, 129 S.Ct. at 2537). Again, however, these comments must be taken in context. The Court itself described them as “illustrative” of its main point which was “[l]ike expert witnesses generally, an analyst's lack of proper training or deficiency in judgment may be disclosed in cross-examination.” *Id.* at 2537. As the Court also observed, “Confrontation is designed to weed out not only the fraudulent analyst, but the incompetent one as well.” *Id.*

The record is clear that it was Ms. Powers who examined an aborted fetus specimen and buccal swabs taken from C.D., and blood samples apparently taken from defendant Richard Pendergrass, Tr. at 138-42. It was Ms. Powers who conducted a “PCR or polymerase chain reaction” test, Tr. at 124, and ultimately created DNA profiles that were then forwarded to Dr. Conneally of the Indiana University Medical Center for paternity analysis. Tr. at 127, 142. Although the State Police laboratory is qualified to create a DNA profile, it apparently is not qualified to conduct a paternity analysis. Tr. at 127. In any event the “Certificate of Analysis”—a two-page document identifying the evidence received by the laboratory and a summary of the test results—prepared by Ms. Powers and a document entitled “Profiles for Paternity Analysis”—a one-page document detailing the test results—also prepared by Ms. Powers, were admitted into evidence through the testimony of Ms. Powers' supervisor, Ms. Black. It was on the basis of the Profiles for Paternity Analysis that Dr. Conneally reached his conclusion that Pendergrass was the father of the aborted fetus. But, Ms. Powers was never subjected to the rigors of cross-examination on either the examination she performed,*711 the testing she conducted, or the results she reached.

The record shows that Ms. Black testified at length about DNA evidence generally and the specific procedures her office used to map DNA. As to her role, Ms. Black testified, “As the supervisor obviously I supervise nine people. I review their work. I make the case assignments. I make sure the quality control of the entire unit is what it's supposed to be.” Tr. at 121. She further testified:

I do regular reviews of their case work. I do some technical—all DNA case work has to be reviewed by another qualified analyst which is a technical review. I do some of those. I also do some administrative reviews which means then after it's been technically reviewed they are administratively reviewed. I also do quarterly. I do just the regular—randomly pull cases out and review again for the quality of the work. And I can do all of those on any particular case of my choice.

Tr. at 122. Ms. Black testified that she recalled the particular case of Richard Pendergrass, that she reviewed the testing in that case, and that she indicated that review by writing her four digit number on the bottom. Tr. at 126-27, 131. Specifically she said, “Those are my initials that I confirmed that this paperwork that Ms. Powers was providing to Dr. Conneally was an accurate representation of her results.” Tr. at 179.

There is no evidence Ms. Black did anything more than rubber stamp the results of Ms. Powers' work. And the question thus presented is whether those results are in fact accurate. Ms. Black did not testify that she observed Ms. Powers perform any examination of the laboratory specimens or conduct any tests. Obviously Ms. Black could not testify whether Ms. Powers diverged from standard laboratory procedures or how carefully or competently she performed the specific analyses. Although a supervisor might be able to testify to her charge's general competence or honesty, this is no substitute for a jury's first-hand observations of the analyst that performs a given procedure; and a supervisor's initials are no substitute for an analyst's opportunity to carefully consider, under oath, the veracity of her results. “Confrontation is one means of assuring accurate forensic analysis.” *Melendez-Diaz*, 129 S.Ct. at 2536.

In sum, despite whatever ambiguity *Melendez-Diaz* may have created on the question of *who* must testify at trial, it appears to me the opinion is clear enough that a defendant has a constitutional right to confront at the very least the analyst that actually conducts the tests. “A witness's testimony against a defendant is thus inadmissible unless the witness appears at trial or, if the witness is unavailable, the defendant had a prior opportunity for cross-examination.” *Id.* at 2531 (citing *Crawford*, 541 U.S. at 54, 124 S.Ct. 1354). Because Ms. Powers did not appear at trial, and because there was no evidence of her unavailability or a prior opportunity for Pendergrass to cross-examine her, the trial court erred by admitting into evidence Ms. Powers' testimony by way of the Certificate of Analysis and Profiles for Paternity Analysis. I therefore respectfully dissent on this issue.

BOEHM, J., concurs.

Supreme Court of New Mexico.
STATE of New Mexico, Plaintiff–Respondent,
v.
Donald BULLCOMING, Defendant–Petitioner.

No. 31,186.
Feb. 12, 2010.

OPINION

MAES, Justice.

*490 {1} Defendant, Donald Bullcoming, appeals his conviction of aggravated DWI, a fourth-degree felony, contrary to NMSA 1978, Section 66–8–102 (2005, prior to amendments through 2008). Of the three issues that Defendant raises, the main question presented in this appeal is whether a laboratory report of Defendant's blood draw results is testimonial evidence subject to the Confrontation Clause. We first addressed this issue in *State v. Dedman*, 2004–NMSC–037, ¶¶ 30, 45–46, 136 N.M. 561, 102 P.3d 628, and followed the United States Supreme Court case in *Crawford v. Washington*, 541 U.S. 36, 124 S.Ct. 1354, 158 L.Ed.2d 177 (2004), to hold that (1) blood alcohol reports are public records and (2) they are non-testimonial under *Crawford* because public records are not “investigative or prosecutorial” in nature. We reverse our holding in *Dedman* in light of the recent United States Supreme Court case of *Melendez–Diaz v. Massachusetts*, which held that the certificates reporting the results of forensic analysis were “quite plainly affidavits” and thus “there [was] little doubt that [they] fall within the ‘core class of testimonial statements,’ ” governed by the Confrontation Clause. 557 U.S. —, —, 129 S.Ct. 2527, 2532, 174 L.Ed.2d 314 (2009) (5–4 decision) (quoting *Crawford*, 541 U.S. at 51, 124 S.Ct. 1354). Although the blood alcohol report was testimonial, we conclude that its admission did not violate the Confrontation Clause, because the analyst who prepared the report was a mere scrivener who simply transcribed the results generated by a gas chromatograph machine and, therefore, the live, in-court testimony of another qualified analyst was sufficient to satisfy Defendant's right to confrontation.

{2} As to Defendant's other two issues, we hold that while Officer Snowbarger was never formally accepted as an expert witness, the parties understood he was being treated as an expert witness, and could give his opinion regarding the cause of the accident without witnessing it. We further hold that although the trial court erred in admitting Defendant's brother's (Brother) out-of-court hearsay statements, we find this error to be harmless because of the overwhelming evidence against Defendant. We affirm Defendant's convictions.

I. FACTS AND PROCEDURAL HISTORY

{3} We begin with a summary of the facts that the jury reasonably could have found at Defendant's trial. The facts will be further developed in the discussion of the issues. Defendant's vehicle rear-ended Dennis (Randy) Jackson's vehicle while stopped at the intersection of 30th Street and Farmington Avenue in Farmington, New Mexico. Mr. Jackson exited his vehicle to exchange insurance information with Defendant. Mr. Jackson noticed the smell of alcohol on Defendant's breath and his bloodshot eyes, and instructed his wife to call police. When Defendant was informed that police were on their way, Defendant excused himself to the restroom.

{4} Officer Marty Snowbarger of the Farmington Police Department responded to the call, learned that Defendant had left the accident scene, and went to find him. Officer Snowbarger drove his motorcycle in the direction where Defendant was seen walking. He first encountered and questioned Brother, who had been a passenger in the vehicle and also had left the accident scene. Brother explained to Officer Snowbarger that Defendant was the driver of the vehicle at the time of the accident, and pointed east to *491 **5 indicate the direction that Defendant had fled. Soon thereafter, Officer Snowbarger spotted Defendant crossing a nearby bridge at a quick pace and followed him behind a building that was east of the bridge. Officer Snowbarger noticed that Defendant exhibited signs of intoxication such as watery, bloodshot eyes, slurred speech, and smelled the odor of alcohol coming from Defendant. Defendant was taken back to the accident scene in a patrol vehicle. Officer David Rock, who had recently arrived to the accident scene, noticed that Defendant swayed while walking toward the sidewalk. Officer Rock noticed Defendant's bloodshot eyes and the odor of alcohol coming from Defendant's breath and then asked Defendant if he had been drinking that day. Defendant responded that he had a drink at 6:00 a.m., but

had not been drinking since then. The Defendant performed a series of field sobriety tests, which he failed. Defendant was arrested for DWI and transported to the Farmington police station for booking. Because Defendant refused to take a breath test, Officer Rock obtained a search warrant to perform a blood alcohol test. Defendant had a blood alcohol content (BAC) of 0.21gms/100ml, well over the legal limit of 0.08gms/100ml. Defendant was convicted by jury of DWI and sentenced to a prison term of two years.

{5} Defendant appealed to the Court of Appeals raising five issues:

(1) that the district court erred in denying a motion for mistrial based on the prosecutor's improper comment on silence in closing argument, (2) that the district court abused its discretion by allowing testimony by a police officer about the cause of an accident involving Defendant when the officer did not witness the accident, (3) that the district court erred in admitting into evidence blood draw results when the analyst who prepared the results was not available to testify, (4) that the district court erred in admitting into evidence the hearsay statement of Defendant's brother, and (5) that the State did not sufficiently prove Defendant's four prior DWI convictions.

State v. Bullcoming, 2008–NMCA–097, ¶ 1, 144 N.M. 546, 189 P.3d 679. The Court of Appeals determined that (1) the prosecutor was commenting on Defendant's pre-arrest silence, which is permissible for impeachment purposes, *id.* ¶ 7; (2) the officer was properly qualified as an expert witness and could provide his opinion about the cause of the accident, *id.* ¶ 11; (3) the blood alcohol report was non-testimonial, and thus its admission did not violate the Confrontation Clause, *id.* ¶ 17; (4) Brother's statements were not hearsay because they were not offered for the truth of the matter asserted and their admission did not prejudice Defendant, *id.* ¶ 19; and (5) that there was sufficient evidence to prove Defendant's prior convictions, *id.* ¶ 27. The Court of Appeals concluded that Defendant's claims were without merit and affirmed his conviction. *Id.* ¶¶ 1, 28. Defendant's petition for certiorari raised five issues. We granted certiorari to consider the following three issues: (1) whether the trial court abused its discretion by allowing Officer Snowbarger to testify regarding the cause of Defendant's accident; (2) whether the trial court erred in admitting the blood draw results as a business record, over defense counsel's confrontation objection, when the analyst who prepared the results was not available to testify; and (3) whether the trial court erred in admitting, over defense counsel's objection, hearsay testimony through Officer Snowbarger of an eyewitness, Brother, who did not testify at trial.

II. DISCUSSION

A. Whether the Trial Court Erred in Admitting the Blood Draw Results as a Business Record, Over Defense Counsel's Confrontation Objection, When the Analyst Who Prepared the Results Was Not Available to Testify

[1] {6} At trial, the State presented the Report of Blood Alcohol Analysis of Defendant's blood through Gerasimos Razatos, an analyst for the New Mexico Department of Health, Scientific Laboratory Division, Toxicology Bureau (SLD), who helps in overseeing the breath and blood alcohol programs throughout the state. The report is a two-page document and was admitted into evidence as Exhibit 1. It is attached to this opinion for reference. The first page is composed*492 **6 of Part A and Part B. Part A contains chain of custody information, specifically identifying the arresting officer, the donor, the person who drew the donor's blood, and the date, time, and place of the blood draw. Part A also specifies the information sought by the officer and the location where the results are to be sent.

{7} Part B has four parts that primarily provide chain of custody information. The receiving employee signs the first section of Part B, certifying the type of specimen that was received, how it was received, whether the seal was intact, and that the employee complied with the procedures delineated in paragraph two of the second page of Exhibit 1. The analyst signs the second section of Part B, certifying that the seal of the sample was received intact and was broken in the laboratory, that the analyst followed the procedures in paragraph three on the second page of Exhibit 1, and that the test results were recorded by the analyst. A reviewer signs the third section of Part B, certifying that the analyst and the analyst's supervisor are qualified to conduct the analysis and that the established procedures had been followed. Finally, a laboratory employee signs the fourth section of Part B, certifying that a legible copy of the report had been mailed to the donor. Finally, the second page of Exhibit 1 identifies the method

used for testing the blood sample and details the procedures that must be followed by laboratory personnel.

{8} The analyst who prepared Exhibit 1 did not testify at Defendant's trial because he "was very recently put on unpaid leave." However, Razatos, who had no involvement in preparing Exhibit 1, testified about Defendant's BAC and the standard procedures of the laboratory. He testified that the instrument used to analyze Defendant's blood was a gas chromatograph machine. The detectors within the gas chromatograph machine detect the compounds and the computer prints out the results. When Razatos was asked by the prosecutor whether "any human being could look and write and just record the result," he answered, "Correct." On cross-examination he also testified that this particular machine prints out the result and then it is transcribed to Exhibit 1. Both the nurse who drew the blood and the officer who observed the blood draw and who also prepared and sent the blood kit to SLD, testified at trial and were available for cross-examination.

{9} Defendant objected to the admission of Exhibit 1 because the analyst who performed the test was not at trial to testify, which he argued would violate Defendant's constitutional right to confrontation. He also argued that, because Exhibit 1 was prepared in anticipation of trial, it did not qualify as a business record. The trial court admitted Exhibit 1 as a business record exception to the rule against hearsay. Rule 11-803(F), (H) NMRA. The trial court also held that the admission of Exhibit 1 was not prohibited by *Crawford*. Exhibit 1 was shown to the jury.

[2][3] {10} Whether Exhibit 1 was admitted in violation of the Confrontation Clause of the United States Constitution is a question of law which we review de novo. *State v. Rivera*, 2008-NMSC-056, ¶ 10, 144 N.M. 836, 192 P.3d 1213.

{11} The United States Supreme Court in *Crawford* held that the Confrontation Clause prohibits the admission of "testimonial statements" unless the declarant is unavailable to testify, "and the defendant had had a prior opportunity for cross-examination." 541 U.S. at 53-54, 124 S.Ct. 1354. Though the Court declined to definitively state what constitutes a "testimonial" statement, it described the various formulations of the core class of testimonial statements covered by the Confrontation Clause. *Id.* at 51-52, 124 S.Ct. 1354.

{12} In *Dedman*, we followed *Crawford* to hold that (1) blood alcohol reports prepared by SLD are public records, and (2) they are non-testimonial under *Crawford* because public records are not "investigative or prosecutorial" in nature. *Dedman*, 2004-NMSC-037, ¶¶ 30, 45-46, 136 N.M. 561, 102 P.3d 628. We first determined that the reports were admissible because they fell within the hearsay exception for "public records" since they "follow a routine manner of preparation that guarantees a certain level of comfort as to their trustworthiness." *Id.* ¶ 24. Second, though we recognized that the *493 **7 "right of confrontation requires an independent inquiry that is not satisfied by a determination that evidence is admissible under a hearsay exception," we essentially held that blood alcohol reports were not subject to the Confrontation Clause for the same reasons that we considered them to be public records. *Id.* ¶ 25. We determined that the main concern of the Confrontation Clause was the "[i]nvolvement of government officers in the production of testimony with an eye toward trial," because this provide[d] a "unique potential for prosecutorial abuse." *Id.* ¶ 29 (quoting *Crawford*, 541 U.S. at 56 n. 7, 124 S.Ct. 1354). Since blood alcohol reports are not prepared by law enforcement personnel and are neither investigative nor prosecutorial, they do not present the same potential for abuse. *Id.* ¶¶ 29-30. Thus, we concluded that the blood alcohol tests in question were non-testimonial because, as public records, their preparation was "routine, non-adversarial, and made to ensure an accurate measurement." *Id.* ¶ 30.

{13} While this appeal was pending, the United States Supreme Court in *Melendez-Diaz* considered whether a certificate prepared by a forensic laboratory analyst fell within the core class of testimonial statements identified in *Crawford*. *Melendez-Diaz*, 557 U.S. at —, 129 S.Ct. at 2532. The plurality held that the certificates, which reported the results of forensic analysis showing that the substance found in seized bags was cocaine of a certain weight, were "quite plainly affidavits" and thus "[t]here [was] little doubt that [they] fall within the 'core class of testimonial statements,' " governed by the Confrontation Clause. *Id.* Justice Scalia delivered the opinion of the Court in which Justices Stevens, Souter, Thomas and Ginsburg joined. Justice Thomas filed a concurring opinion adhering to his position in *White v. Illinois*, 502 U.S. 346, 365, 112 S.Ct. 736, 116 L.Ed.2d 848 (1992) (Thomas, J., concurring in part and concurring in judgment), that "[t]he Confrontation Clause is implicated by extrajudicial statements only insofar as they are contained in formalized testimonial materials, such as affidavits, depositions, prior testimony, or confessions." *Melendez-Diaz*, 557 U.S. at —, 129 S.Ct. at 2543 (Thomas, J., concurring)

(internal quotation marks and citation omitted). Because the certificates in question were “quite plainly affidavits,” Justice Thomas agreed with the majority that they fall within the core class of testimonial statements. *Id.*

{14} The other four Justices that joined Justice Thomas to form the plurality went further, stating that the certificates were testimonial because they were “ ‘made under circumstances which would lead an objective witness reasonably to believe that the statement would be available for use at a later trial,’ ” *id.* at —, 129 S.Ct. at 2531 (quoting *Crawford*, 541 U.S. at 52, 124 S.Ct. 1354), and were “functionally identical to live, in-court testimony, doing ‘precisely what a witness does on direct examination,’ ” *id.* at —, 129 S.Ct. at 2532 (quoting *Davis v. Washington*, 547 U.S. 813, 830, 126 S.Ct. 2266, 165 L.Ed.2d 224 (2006)). They reasoned that the Sixth Amendment only contemplated “two classes of witnesses—those against the defendant and those in his favor” and that “there is not a third category of witnesses, helpful to the prosecution, but somehow immune from confrontation.” *Id.* at —, 129 S.Ct. at 2534. Forensic evidence is neither immune from manipulation nor inherently “neutral.” *Id.* at —, 129 S.Ct. at 2536.

{15} On the other hand, the dissent authored by Justice Kennedy distinguishes between “conventional witness[es],” which he defines as those “who [have] personal knowledge of some aspect of the defendant's guilt,” and laboratory analysts who perform tests. *Id.* at —, 129 S.Ct. at 2543 (Kennedy, J., dissenting). Kennedy also focused on the policy implications of requiring laboratory analysts to testify, and argued that *Melendez–Diaz* “threatens to disrupt forensic investigations across the country and to put prosecutions nationwide at risk of dismissal based on erratic, all-too-frequent instances when a particular laboratory technician ... simply does not or cannot appear.” *Id.* at —, 129 S.Ct. at 2549.

{16} *Melendez–Diaz* throws into doubt our assessment in *Dedman* that blood alcohol reports as public records are inherently immune*494 **8 from governmental abuse. First, *Melendez–Diaz* clarified that “analysts' certificates—like police reports generated by law enforcement officials—do not qualify as business or public records” because they are “calculated for use essentially in the court, not in the business.” *Id.* at —, 129 S.Ct. at 2538 (internal quotation marks and citation omitted). Though “[d]ocuments kept in the regular course of business may ordinarily be admitted at trial despite their hearsay status, ... that is not the case if the regularly conducted business activity is the production of evidence for use at trial.” *Id.* Second, *Melendez–Diaz* made clear that the same concerns of governmental abuse which exist in the production of evidence by law enforcement exist in the production of forensic evidence. The Court noted that “[a] forensic analyst responding to a request from a law enforcement official may feel pressure—or have an incentive—to alter the evidence in a manner favorable to the prosecution.” *Id.* at —, 129 S.Ct. at 2536. For these reasons, we conclude that *Dedman's* determination that blood alcohol tests are non-testimonial does not comport with the Supreme Court's ruling in *Melendez–Diaz*, and *Dedman* is overruled.

{17} The State argues that *Melendez–Diaz* can be distinguished from the case at bar because the forensic reports in *Melendez–Diaz* were sworn affidavits and Exhibit 1 in the present case is not a sworn document. The State argues that *Melendez–Diaz* was a plurality opinion and, therefore, the holding “may be viewed as that position taken by those Members who concurred in the judgment[] on the narrowest grounds.” *Gregg v. Georgia*, 428 U.S. 153, 169 n. 15, 96 S.Ct. 2909, 49 L.Ed.2d 859 (1976); *accord Marks v. United States*, 430 U.S. 188, 97 S.Ct. 990, 51 L.Ed.2d 260 (1977). The narrowest grounds for the holding are found in Justice Thomas's concurrence. He joined the majority because he agreed that the reports in question were “plainly affidavits,” and thus clearly were “formalized testimonial materials” governed by the Confrontation Clause. *Melendez–Diaz*, 557 U.S. at —, 129 S.Ct. at 2543 (Thomas, J., concurring). The State therefore argues that, because Exhibit 1 in the present case was not an affidavit sworn by the declarant, it is not within the formalized testimonial materials described in *Melendez–Diaz* and, therefore, not subject to the Confrontation Clause.

{18} Contrary to the State's argument, an affidavit is merely listed as one of several examples of “formalized testimonial materials” described in *Melendez–Diaz*. *Id.* at —, 129 S.Ct. at 2532. (“[T]he Confrontation Clause is implicated by extrajudicial statements only insofar as they are contained in formalized testimonial materials such as affidavits, depositions, prior testimony, or confessions.” (internal quotation marks and citation omitted)). Even prior to *Melendez–Diaz*, it was made clear in *Crawford* that “the absence of oath was not dispositive” in determining if a statement is testimonial. *Crawford*, 541 U.S. at 52, 124 S.Ct. 1354. Exhibit 1 in this case, like the certificates in *Melendez–Diaz*, are “formalized testimonial materials” in that they were made “for the purpose of establishing or

proving some fact.” *Melendez–Diaz*, 557 U.S. at —, 129 S.Ct. at 2532 (internal quotation marks and citation omitted). In *Melendez–Diaz*, the certificates were offered to prove that “the substance found in the possession of Melendez–Diaz and his codefendants was, as the prosecution claimed, cocaine.” *Id.* Likewise, in the present case, Exhibit 1 was offered to prove that Defendant had a BAC of 0.21 gms/100ml. As in *Melendez–Diaz*, Exhibit 1 was “functionally identical to live, in-court testimony, doing precisely what a witness does on direct examination.” *Id.* (internal quotation marks and citation omitted). Therefore, Exhibit 1 in the present case, like the certificates in *Melendez–Diaz*, are testimonial despite the fact that they are unsworn.

[4] {19} However, the Confrontation Clause permits the admission of testimonial statements “so long as the declarant is present at trial to defend or explain it.” *Crawford*, 541 U.S. at 59 n. 9, 124 S.Ct. 1354 (citation omitted). Although the analyst who prepared Exhibit 1 was not present at trial, the evidence revealed that he simply transcribed the results generated by the gas chromatograph machine. He was not required to interpret the results, exercise independent*495 **9 judgment, or employ any particular methodology in transcribing the results from the gas chromatograph machine to the laboratory report. *Cf. Melendez–Diaz*, 557 U.S. at —, 129 S.Ct. at 2537–38 (stating that the methodology used in generating the reports “require [d] the exercise of judgment and present[ed] a risk of error that might be explored on cross-examination”); *State v. Aragon*, 2010–NMSC–008, ¶ 30, 147 N.M. 474, 225 P.3d 1280 (holding that “[t]he determinations of whether a substance is narcotic and its degree of purity ... must be classified as ‘opinion,’ rooted in the assessment of one who has specialized knowledge and skill”). Thus, the analyst who prepared Exhibit 1 was a mere scrivener, and Defendant’s true “accuser” was the gas chromatograph machine which detected the presence of alcohol in Defendant’s blood, assessed Defendant’s BAC, and generated a computer print-out listing its results. *See United States v. Moon*, 512 F.3d 359, 362 (7th Cir.2008) (“[T]he Confrontation Clause does not forbid the use of raw data produced by scientific instruments, though the interpretation of those data may be testimonial.”); *United States v. Washington*, 498 F.3d 225, 230 (4th Cir.2007) (“The raw data generated by the diagnostic machines are the ‘statements’ of the machines themselves, not their operators.”); *United States v. Hamilton*, 413 F.3d 1138, 1142–43 (10th Cir.2005) (concluding that the computer-generated header information accompanying pornographic images retrieved from the Internet “was neither a ‘statement’ nor a ‘declarant’ ”). Under these circumstances, we conclude that the live, in-court testimony of a separate qualified analyst is sufficient to fulfill a defendant’s right to confrontation. *See People v. Rutterschmidt*, 98 Cal.Rptr.3d 390, 411–12 (Cal.Ct.App.2009), *review granted and opinion superseded by People v. Rutterschmidt*, 102 Cal.Rptr.3d 281, 220 P.3d 239 (2009) (holding that the testimony of a qualified analyst who did not prepare the defendant’s toxicology report was admissible under the Confrontation Clause).

{20} In this case, Razatos, an SLD analyst, was qualified as an expert witness with respect to the gas chromatograph machine and the SLD’s laboratory procedures. Razatos provided live, in-court testimony and, thus, was available for cross-examination regarding the operation of the gas chromatograph machine, the results of Defendant’s BAC test, and the SLD’s established laboratory procedures. Additionally, Razatos could be questioned about whether the operation of the gas chromatograph machine required specialized skill that the operator did not possess, involved risks of operation that might influence the test results, and required the exercise of judgment or discretion, either in the performance of the test or the interpretation of the results. Because Razatos was a competent witness who provided live, in-court testimony, we conclude that the admission of Exhibit 1 did not violate the Confrontation Clause.

{21} We recognize that, in addition to Defendant’s BAC test results, Exhibit 1 also contained information regarding chain of custody. However, in *Melendez–Diaz*, the United States Supreme Court indicated that chain of custody information may not be testimonial under the Confrontation Clause.^{FN1} The Court stated that

FN1. We are also referring to the Committee on Rules of Criminal Procedure the task of drafting a notice-and-demand rule comparable to those seemingly noted with approval in *Melendez–Diaz*, 557 U.S. at —, 129 S.Ct. at 2541.

[W]e do not hold, and it is not the case, that anyone whose testimony may be relevant in establishing the chain of custody, authenticity of the sample, or accuracy of the testing device, must appear in person as part of the prosecution’s case. While the dissent is correct that “[i]t is the obligation of the prosecution to establish the chain of custody,” *post*, at 2546, this does not mean that everyone who laid hands on the evidence must be called. As stated in the dissent’s own quotation, *ibid.*, from *United States v. Lott*, 854 F.2d 244, 250 (C.A.7 1988), “gaps in

the chain [of custody] normally go to the weight of the evidence rather than its admissibility.” It is up to the prosecution to decide what steps in the chain of custody are so crucial as to require evidence; but what testimony *is* *496 **10 introduced must (if the defendant objects) be introduced live. Additionally, documents prepared in the regular course of equipment maintenance may well qualify as nontestimonial records. *Melendez-Diaz*, 557 U.S. at — n. 1, 129 S.Ct. at 2532 n. 1.

{22} In the present case, the jury heard live, in-court testimony from the officer who arrested Defendant and the nurse who drew Defendant's blood. Although Defendant had the opportunity to cross-examine these individuals regarding the chain of custody, he did not do so. Indeed, the record reflects that Defendant was willing to stipulate that the nurse “drew the blood ... properly.” To the extent that Defendant based his Confrontation Clause claim on the chain of custody information contained in Exhibit 1, it is clear that his objection was simply pro forma.

{23} We reiterate that the admissibility of Exhibit 1 under the Confrontation Clause was dependent on the live, in-court testimony of a qualified analyst. Clearly, had Razatos not been present to testify, Exhibit 1 would not have been admissible because Defendant would not have had the opportunity to meaningfully cross-examine a qualified witness regarding the substance of the exhibit. A defendant cannot cross-examine an exhibit. However, because Razatos did testify, Defendant's right of confrontation was preserved and the admissibility of the exhibit depends on the application of our rules of evidence.

[5] {24} Rule 11–703 NMRA provides, in relevant part, that

The facts or data in the particular case upon which an expert bases an opinion or inference may be those perceived by or made known to the expert at or before the hearing. If of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject, *the facts or data need not be admissible in evidence in order for the opinion or inference to be admitted*. Facts or data that are otherwise inadmissible shall not be disclosed to the jury by the proponent of the opinion or inference unless the court determines that their probative value in assisting the jury to evaluate the expert's opinion substantially outweighs their prejudicial effect.

(Emphasis added.); *see also Coulter v. Stewart*, 97 N.M. 616, 617, 642 P.2d 602, 603 (1982) (“While experts may rely on hearsay under Rule 703, the hearsay itself is not admissible.”). Thus, Exhibit 1 properly was admitted under Rule 11–703 if it contains facts or data of the type reasonably relied upon by experts in the field and its probative value substantially outweighs its prejudicial effect.

{25} As previously explained, the results of the gas chromatograph machine BAC test do not constitute expert opinion, but, rather, constitute facts or data of the type reasonably relied upon by experts in the field. *Cf. Aragon*, 2010–NMSC–008, ¶ 30 (holding that an analyst could not rely on an out-of-court statement of another analyst, regarding whether a substance is narcotic and its degree of purity, because the out-of-court statement was the expert opinion of a non-testifying analyst). Moreover, the trial court reasonably could have found that the probative value of Exhibit 1 in assisting the jury to evaluate Razatos's testimony substantially outweighed its prejudicial effect. Accordingly, Razatos properly relied on the gas chromatograph machine results in his testimony and the trial court did not abuse its discretion in admitting Exhibit 1 into evidence.

{26} Although we find no error in the present case, we strongly suggest that, in future cases, the State admit into evidence the raw data produced by the gas chromatograph machine to supplement the live, in-court testimony of its forensic analyst. With the admission of this raw data, which is not subject to the constraints of the Confrontation Clause, the jury will be able to ascertain first hand the accuracy and reliability of the analyst's testimony regarding a defendant's BAC.

B. Whether the Trial Court Abused its Discretion by Allowing Officer Snowbarger to Offer His Opinion Testimony as to the Cause of the Accident

[6] {27} The issue that Defendant raises on appeal is whether the trial court properly qualified Officer Snowbarger as an expert *497 **11 witness pursuant to Rule 11–702 NMRA, and, if not, whether his testimony as to the cause of the accident was properly admitted. The following facts are relevant to this claim. During trial,

defense counsel objected to Officer Snowbarger offering his opinion regarding the cause of the accident because “[t]here [was] no foundation for it. He’s not an expert.” The trial court then requested that the State lay a foundation to qualify him as an expert. After Officer Snowbarger testified about his experience and training in traffic reconstruction, defense counsel continued to object and was overruled by the trial court. The officer then testified that his “opinion [was] that the driver of the vehicle was not paying attention to the vehicle in front of him, or his driving habits.” The prosecutor followed up asking, “[W]ere you able to formulate an opinion based on your observations as to why the driver was not paying attention?” The officer responded, “Having contacted him and observed the things that I’ve testified to, I believe that he was under the influence of some kind of intoxicating liquor.”

[7] {28} Whether a witness possesses the necessary expertise or a sufficient foundation has been established to permit a witness to testify as an expert witness is a matter entrusted to the sound discretion of the trial court. *Sanchez v. Molycorp, Inc.*, 103 N.M. 148, 152, 703 P.2d 925, 929 (Ct.App.1985). Absent an abuse of discretion, a reviewing court will not disturb the trial court’s decision to accept or reject such testimony. *Id.*

[8] {29} Rule 11–702 only requires that the proponent of the testimony demonstrate that the expert has acquired sufficient “knowledge, skill, experience, training or education” so that his testimony will aid the fact finder. To the extent that Defendant is challenging Officer Snowbarger’s qualifications as an expert witness, he offers no reason why Officer Snowbarger does not have the proper qualifications to testify as an expert witness. Instead, Defendant argues that only “an expert accident reconstructionist” could offer testimony regarding the cause of the accident. At trial, Officer Snowbarger testified that, because he is in the traffic division of the police force, he has attended “a series of schools to become a traffic crash reconstructionist” and holds “certifications as a traffic crash reconstructionist.” In addition, he testified that his primary duty was “to investigate traffic collisions from the very minor all the way up to fatal crashes.” Defense counsel did not conduct *voir dire* examination or otherwise challenge his qualifications. Therefore, we cannot say that the trial court abused its discretion in qualifying Officer Snowbarger as an expert witness. Furthermore, we note that the jury was free to weigh every aspect of Officer Snowbarger’s qualifications in their evaluation of his testimony, and any perceived deficiencies in his qualifications would be “relevant to the weight accorded by the jury to [the] testimony and not to the testimony’s admissibility.” *State v. Torrez*, 2009–NMSC–029, ¶ 18, 146 N.M. 331, 210 P.3d 228 (internal quotation marks and citation omitted).

[9][10] {30} Defendant also challenges the admission of Officer Snowbarger as an expert witness, because the trial court failed to formally accept him as an expert. However, Defendant in his briefing before this Court fails to show what formalities are required to put the parties on notice that the trial court is accepting a witness as an expert. We reject the implication that there are formal, talismanic words that must be uttered in order to signal the court’s acceptance of a witness as an expert. Instead, we determine that a witness may testify as an expert as long as the circumstances are such that the parties are on notice of the court’s acceptance of that witness as an expert. In the present case, given defense counsel’s objection to Officer Snowbarger’s testimony on the basis that he is “not an expert,” the foundation subsequently laid by the officer at the trial court’s request, and the trial court’s decision to overrule the defense counsel’s continued objection, we conclude there was sufficient notice to the parties that the trial court was accepting Officer Snowbarger as an expert witness.

{31} Accordingly, we conclude that the trial court properly accepted Officer Snowbarger as an expert witness and did not abuse its discretion by allowing him to offer *498 **12 his opinion testimony as to the cause of the accident.

C. Whether the Trial Court Erred in Admitting Brother’s Out-of-Court Statements

[11] {32} The third issue that Defendant raises on appeal is whether Officer Snowbarger’s testimony regarding Brother’s out-of-court statements was improperly admitted because it contained impermissible hearsay and violated the Confrontation Clause. At trial, Officer Snowbarger testified that when he came in contact with Brother and questioned him about the accident and where Defendant had gone, Brother “pointed in the direction of east, [and] said that [Defendant] had been driving the vehicle.” Defense counsel objected to the statement as being hearsay, but the trial court overruled the objection and instructed the jury that Officer Snowbarger’s statement “[was] not for the truth ... but to show why ... the officer did what he did.”

[12][13] {33} We first address Defendant's hearsay issue. This Court reviews the admission of hearsay for an abuse of discretion by the trial court. *State v. Salgado*, 1999–NMSC–008, ¶ 5, 126 N.M. 691, 974 P.2d 661. Hearsay is an out-of-court statement offered to prove the truth of the matter asserted. Rule 11–801(C) NMRA. “An out-of-court statement is inadmissible unless it is specifically excluded as non-hearsay under Rule 11–801(D) or falls within a recognized exception in the rules of evidence, or is otherwise made admissible by rule or statute.” *State v. McClagherty*, 2003–NMSC–006, ¶ 17, 133 N.M. 459, 64 P.3d 486 (citation omitted).

{34} The State argues that the statements were offered to show why the police officer acted as he did and not for its truth; therefore, they were properly admitted as non-hearsay. In *State v. Rosales*, 2004–NMSC–022, ¶ 16, 136 N.M. 25, 94 P.3d 768, this Court noted that “[e]xtrajudicial statements or writings may properly be received into evidence, not for the truth of the assertions therein ... but for such legitimate purposes as that of establishing knowledge, belief, good faith, reasonableness, motive, effect on the hearer or reader, and many others.” In addition, the evidence must have some proper probative effect upon or relevancy to an issue in the case in order to be admissible. Rule 11–402 NMRA; *State v. Alberts*, 80 N.M. 472, 475, 457 P.2d 991, 994 (Ct.App.1969). Courts have been especially reluctant to allow testimony of a police officer to explain his conduct during the course of the investigation, because there is high potential for abuse by prosecution to admit highly prejudicial and otherwise inadmissible hearsay and the evidence is seldom relevant. *State v. Otto*, 2007–NMSC–012, ¶ 28, 141 N.M. 443, 157 P.3d 8 (Chavez, J., dissenting) (“In criminal cases the prosecution is fond of offering evidence of inculpatory out-of-court assertions as ‘background’ to explain why law enforcement agents decided to investigate a defendant. Such evidence is seldom relevant.” (quoting David F. Binder, *Hearsay Handbook*, § 2:10, at 2–40 (4th ed.2001))); see *Alberts*, 80 N.M. at 475, 457 P.2d at 994 (“The naming of defendants as persons engaged in ‘illegal marijuana traffic,’ for the purpose of showing why [an officer] conducted an investigation, is not a legitimate reason for admitting [hearsay] testimony.”); see also *State v. Blevins*, 36 Ohio App.3d 147, 521 N.E.2d 1105, 1108 (1987) (“[T]he potential for abuse in admitting such statements is great where the purpose is merely to explain an officer's conduct during the course of an investigation.”).

{35} Despite the trial court's instruction to the jury that Officer Snowbarger's statements should not be considered for their truth, we find no other purpose for admitting these statements other than to prove that Defendant was the driver of the vehicle and headed east, as opposed to north to the creek, as he claimed in his testimony. The police officer's reason for pursuing Defendant was not a relevant issue at trial, therefore, the statements were hearsay and inadmissible.

[14][15] {36} However, evidence admitted in violation of our hearsay rules is grounds for a new trial unless the error was harmless. See *State v. Downey*, 2008–NMSC–061, ¶ 39, 145 N.M. 232, 195 P.3d 1244. Where a defendant has established a violation of court *499 **13 rules, non-constitutional error review is appropriate, and a reviewing court should only conclude that a non-constitutional error is harmless when there is no *reasonable probability* the error affected the jury's verdict. *State v. Barr*, 2009–NMSC–024, ¶¶ 47–48, 146 N.M. 301, 210 P.3d 198.

[16][17][18] {37} To determine whether there is a reasonable probability that a non-constitutional error contributed to a verdict, the appellate courts should consider whether there is “(1) substantial evidence to support the conviction without reference to the improperly admitted evidence; (2) such a disproportionate volume of permissible evidence that, in comparison, the amount of improper evidence will appear minuscule; and (3) no substantial conflicting evidence to discredit the State's testimony.” *Id.* ¶ 56 (footnote omitted). No one factor is determinative, but all three factors when considered in conjunction with one another “provide a reviewing court with a reliable basis for determining whether an error is harmless.” *Id.* ¶ 55. In applying these factors, we must not re-weigh the evidence against a defendant, but rather determine “whether the guilty verdict actually rendered in *this* trial was surely unattributable to the error.” *Id.* ¶ 57 (citation omitted). “Accordingly, in some circumstances where, in our judgment, the evidence of a defendant's guilt is sufficient even in the absence of the trial court's error, we may still be obliged to reverse the conviction if the jury's verdict appears to have been tainted by error.” *State v. Macias*, 2009–NMSC–028, ¶ 38, 146 N.M. 378, 210 P.3d 804.

{38} First, we examine whether there was substantial evidence to support the conviction without reference to the improperly admitted evidence. The jury could have reasonably relied on Mr. Jackson's testimony that immediately after the accident and before Defendant left the accident scene, Defendant had blood shot eyes and alcohol on his breath, in reaching its conclusion that Defendant was intoxicated at the time of the accident even

before he left the accident scene. Additionally, a reasonable jury could have considered this testimony coupled with the testimony of the two arresting officers to conclude that Defendant was intoxicated to the slightest degree at the time of the accident. Based on the testimony of Mr. Jackson and Officer Snowbarger that Defendant was only away from the accident scene for approximately ten minutes when he was found by the officer, the jury could have reasonably concluded that this would not be enough time for Defendant to cross the street, walk around, climb over a fence, walk to the side of the creek, and drink a pint and a half-gallon of vodka, as Defendant claimed at trial.

[19] {39} The second factor requires us to assess the impermissible evidence in light of the permissible evidence, the disputed factual issues, and the essential elements of the crime charged. Our focus is not limited to the quantity of impermissible evidence, but, rather, encompasses the quality of that evidence and its likely impact on the jury. *See State v. Moore*, 94 N.M. 503, 505, 612 P.2d 1314, 1316 (1980) (recognizing that “a trial can be prejudiced by testimony lasting but a fraction of a second”). We conclude that the improperly admitted statements were insignificant in comparison to the permissible evidence because they did not relate to centrally disputed facts in the case. First, the parties did not dispute that Defendant was driving the vehicle at the time of the accident; therefore, Brother's statement that Defendant was driving had no impact on the jury's resolution of any disputed factual issue. Second, the fact that Brother pointed east while Defendant testified that he headed north is not inconsistent with Defendant's claim that he became intoxicated during his flight from the accident scene, especially considering that Defendant testified that he “walked around” before heading to the creek, where he encountered the men with whom he drank. Thus, this minor discrepancy, even if noticed by the jury, is not one which would have tainted their determination of Defendant's guilt.

[20][21] {40} Finally, we address the third factor, namely, whether there was substantial conflicting evidence to discredit the State's testimony. There is no conflicting evidence regarding the fact that Defendant was driving the vehicle at the time of the accident. The only conflicting evidence regarding which direction Defendant went ***500**14** when he fled the accident was Defendant's testimony that he went north instead of east. Considering the minimal probative value of the hearsay testimony and the strength of the countervailing evidence, we conclude that the trial court's error in admitting the hearsay statements was harmless.

[22] {41} We next address Defendant's Confrontation Clause claim. Generally, whether out-of-court statements are admissible under the Confrontation Clause is reviewed de novo, as a question of law. *State v. Ruiz*, 120 N.M. 534, 536, 903 P.2d 845, 847 (Ct.App.1995), *abrogated by State v. Martinez*, 2007–NMSC–025, 141 N.M. 713, 160 P.3d 894. However, because counsel did not object under the Confrontation Clause in the trial court, this Court must review the issue under fundamental error. *State v. Osborne*, 111 N.M. 654, 662, 808 P.2d 624, 632 (1991). “Fundamental error only applies in exceptional circumstances when guilt is so doubtful that it would shock the judicial conscience to allow the conviction to stand.” *State v. Baca*, 1997–NMSC–045, ¶ 41, 124 N.M. 55, 946 P.2d 1066, *overruled on other grounds by State v. Belanger*, 2009–NMSC–025, ¶ 36, 146 N.M. 357, 210 P.3d 783. Defendant concedes that there was no material issue rising to the level of fundamental error with regard to Brother's statement that Defendant was driving when the accident occurred; therefore, we do not address this question. However, Defendant argues that there was a material issue concerning Brother's indication that Defendant headed east, because Defendant, to the contrary, testified at trial that he headed north, climbed over a fence, and then met the Native American men that he drank with by the creek. The Defendant claims that this statement prejudiced Defendant's case because “the direction Mr. Bullcoming walked in, where Mr. Bullcoming ended up, and how long he was gone, were critical to the jury's determination of guilty.” As mentioned above, this statement had little probative value especially in light the other evidence presented by the prosecution. Thus, we conclude that there was no fundamental error, because Defendant was not prejudiced in a significant way by the admission of the statement.

CONCLUSION

{42} We conclude that the blood alcohol report, prepared by an analyst who simply transcribed the results generated by a gas chromatograph machine, properly was admitted into evidence through the live, in-court testimony of a separate qualified analyst. We further conclude that, although Officer Snowbarger was never formally qualified as an expert witness, the parties understood that he was testifying as an expert witness and, thus, he could opine regarding the cause of the accident without witnessing it. Finally, though the trial court erred in admitting Brother's out-of-court hearsay statements, the error was harmless. Thus, we affirm Defendant's conviction.

{43} **IT IS SO ORDERED.**

Supreme Court of New Mexico.
STATE of New Mexico, Plaintiff–Respondent,
v.
Anthony ARAGON, Defendant–Petitioner.

No. 31,187.
Feb. 12, 2010.

OPINION

CHÁVEZ, Chief Justice.

*476 {1} Anthony Aragon (“Defendant”) appeals his conviction for possession of methamphetamine, arguing that his Sixth Amendment right to confront witnesses against him was violated when a chemical forensic report was admitted into evidence based on testimony from an analyst who had not prepared the report. The Court of Appeals affirmed his conviction, holding that admission of the report did not implicate Defendant’s confrontation rights because the report is non-testimonial hearsay under *State v. Dedman*, 2004–NMSC–037, ¶ 30, 136 N.M. 561, 102 P.3d 628. *State v. Aragon*, No. 26,185, slip op. at 9 (N.M. Ct.App. June 4, 2008).

{2} In light of the recent Supreme Court opinion in *Melendez–Diaz v. Massachusetts*, 557 U.S. —, 129 S.Ct. 2527, 174 L.Ed.2d 314 (2009) and this Court’s opinion in *State v. Bullcoming*, 2010–NMSC–007, 147 N.M. 487, 226 P.3d 1 (2010), in which we overruled *Dedman*, we hold that the report prepared by the non-testifying forensic scientist and the trial testimony regarding that report were inadmissible and violated Defendant’s right of confrontation. Nonetheless, we determine that the errors of admission were harmless beyond a reasonable doubt and affirm the conviction.

I. BACKGROUND

{3} On November 8, 2003, Roswell police executed a narcotic search warrant at a home in Roswell. Upon arrival, police found Defendant hiding under a tarp in the basement, and he was taken outside with the other occupants of the residence. Police found a “little clear plastic bag of a whitish, crystal substance” in the basement, “right where [Defendant’s] hands were” when the officer located him. A second officer found a larger clear plastic bag in the pocket of a jacket located in an upstairs bedroom that also contained a whitish crystal-like substance. The officer took the jacket outside and asked the occupants who owned it. Defendant initially confirmed that the jacket was his, but immediately changed his response, denying ownership.

{4} Both plastic bags were sent to the New Mexico Department of Public Safety’s Las Cruces Forensics Laboratory (“Southern Crime Laboratory”) for analysis. Southern Crime Laboratory forensic chemist Eric D. Young (“Young”) analyzed the larger bag that was found in the jacket pocket and prepared a report that was admitted into evidence as Exhibit 12, describing the chemical makeup of the bag’s contents. Young concluded that it contained 64 percent pure methamphetamine and weighed 6.93 grams. Andrea Champagne (“Champagne”), also at that time a forensic chemist at the Southern Crime Laboratory, conducted an analysis and prepared a similar report on the contents of the smaller bag that was found near Defendant in the basement. She concluded that it was 64.3 percent pure methamphetamine and weighed 1.05 grams. Her report was admitted into evidence as Exhibit 13.

{5} Young testified at trial regarding the results of his analysis, the associated report, the laboratory procedure for preparing such reports, and the fact that Champagne did the analysis and prepared a similar report on the contents of the smaller bag. Young also testified regarding the contents and conclusion contained in Champagne’s report. Champagne’s report was admitted into evidence over defense counsel’s objection that admission of the report would violate Defendant’s right of confrontation because the report is inadmissible testimonial hearsay. The district court admitted both reports under the “[r]ecords of regularly conducted activity” and “[p]ublic records and reports” exceptions to the rule against hearsay, Rules 11–803(F) and (H) NMRA, respectively. Although*477 **1283 the district court found that Champagne’s chemical analysis report was “testimonial” for purposes of the Confrontation Clause, U.S. Const. amend. VI, it allowed Young to testify regarding Champagne’s analysis and opinion, even though Young did not observe, supervise, or participate in either the analysis or the preparation of the report. The

jury convicted Defendant on one count of possession of a controlled substance.

II. DISCUSSION

A. ADMISSION OF THE FORENSIC CHEMIST'S REPORT PREPARED BY A NON TESTIFYING ANALYST VIOLATED DEFENDANT'S RIGHT OF CONFRONTATION.

[1][2][3][4][5][6][7][8] {6} Defendant contends that admission of Champagne's forensic report, identifying the white, crystal-like substance in the smaller bag as methamphetamine, violated his confrontation rights because the report is testimonial in nature, and he did not have an opportunity to cross-examine her.

“In all criminal prosecutions, the accused shall enjoy the right ... to be confronted with the witnesses against him....” U.S. Const. amend. VI. Out-of-court testimonial statements are barred under the Confrontation Clause, unless the witness is unavailable and the defendant had a prior opportunity to cross-examine the witness, regardless of whether such statements are deemed reliable by the court.

State v. Zamarripa, 2009–NMSC–001, ¶ 23, 145 N.M. 402, 199 P.3d 846 (2008) (citing *Crawford v. Washington*, 541 U.S. 36, 68–69, 124 S.Ct. 1354, 158 L.Ed.2d 177 (2004)). Questions of admissibility under the Confrontation Clause are questions of law, which we review de novo. *Id.* ¶ 22. In *Crawford*, the Supreme Court “once again reject[ed] the view that the Confrontation Clause applies of its own force only to in-court testimony [.]” 541 U.S. at 50, 124 S.Ct. 1354. Rather, *Crawford* held that “[i]t applies to witnesses against the accused—in other words, those who bear testimony,”—where “testimony” is a “solemn declaration or affirmation made for the purpose of establishing or proving some fact.” *Id.* at 51, 124 S.Ct. 1354 (internal quotation marks and citation omitted). Therefore, only testimonial statements “cause the declarant to be a witness within the meaning of the Confrontation Clause.” *Davis v. Washington*, 547 U.S. 813, 821, 126 S.Ct. 2266, 165 L.Ed.2d 224 (2006) (internal quotation marks and citation omitted). Although it did not offer a comprehensive definition of “testimonial,” the Court identified a “core class of testimonial statements”:

ex parte in-court testimony or its functional equivalent ... that the defendant was unable to cross-examine, or similar pretrial statements that declarants would reasonably expect to be used prosecutorially [;] ... extrajudicial statements ... contained in formalized testimonial materials, such as affidavits, depositions, prior testimony, or confessions [;] ... statements that were made under circumstances which would lead an objective witness reasonably to believe that the statement would be available for use at a later trial[;] and to police interrogations.

Crawford, 541 U.S. at 51–52, 68, 124 S.Ct. 1354 (internal quotation marks and citations omitted). Such testimonial hearsay is barred by the Sixth Amendment unless the declarant is unavailable and the defendant had a prior opportunity for cross-examination. *Id.* at 53–54, 68, 124 S.Ct. 1354. *Crawford* also reiterated the Court's prior holding in *California v. Green*, 399 U.S. 149, 162, 90 S.Ct. 1930, 26 L.Ed.2d 489 (1970), that “when the declarant appears for cross-examination at trial, the Confrontation Clause places no constraints at all on the use of his prior testimonial statements.... The Clause does not bar admission of a statement so long as the declarant is present at trial to defend or explain it.” *Crawford*, 541 U.S. at 59 n. 9, 124 S.Ct. 1354 (citation omitted). “The Clause also does not bar the use of testimonial statements for purposes other than establishing the truth of the matter asserted.” *Id.* (citation omitted). Once it has been established that the Confrontation Clause does not bar admission of the statement, the rules of evidence govern whether the statement is admissible.

{7} Eight months after the United States Supreme Court filed its opinion in *Crawford*, *478 **1284 we issued our opinion in *Dedman*, and held that blood-alcohol reports prepared by the New Mexico Department of Public Health's Scientific Laboratory Division are admissible hearsay under the “public record” exception of Rule 11–803(H). 2004–NMSC–037, ¶ 24, 136 N.M. 561, 102 P.3d 628. We determined that the reports were non-testimonial because although they are “prepared for trial, the process is routine, non-adversarial, and made to ensure an accurate measurement.” *Id.* ¶ 30. We were persuaded that laboratory personnel are “not law enforcement, and the report is not investigative or prosecutorial.” *Id.* Ultimately, we concluded that such forensic reports were “very different from the other examples of testimonial hearsay evidence: ‘prior testimony at a preliminary hearing, before a grand jury, or at a former trial; and ... police interrogations.’ ” *Id.* (quoting *Crawford*, 541 U.S. at 68, 124 S.Ct. 1354).

{8} Since we decided *Dedman*, the United States Supreme Court has issued its fractured opinion in *Melendez–Diaz*. In *Melendez–Diaz*, the Court held that affidavit reports prepared and sworn to by analysts at a state crime laboratory identifying a substance as cocaine “are functionally identical to live, in-court testimony, doing precisely what a witness does on direct examination,” and so “fall within the core class of testimonial statements [.]” 557 U.S. at —, 129 S.Ct. at 2532 (internal quotation marks and citations omitted). Analysts are witnesses against defendants because, in the case of narcotics, they prove a fact necessary for conviction: that the substance in question is the contraband the prosecution alleges it to be. *See id.* at —, 129 S.Ct. at 2533. In essence, a person is a witness for Confrontation Clause purposes when that person's statements go to an issue of guilt or innocence. *See id.* at — n. 8, 129 S.Ct. at 2539 n. 8. Therefore, “[a]bsent a showing that the analysts were unavailable to testify at trial and that petitioner had a prior opportunity to cross-examine them, petitioner was entitled to be confronted with the analysts at trial.” *Id.* at —, 129 S.Ct. at 2532 (internal quotation marks and citation omitted).

{9} The State urges us to adhere to our opinion in *Dedman* and limit the application of *Melendez–Diaz*. The State's arguments can be categorized as follows: (1) Justice Thomas's narrow concurring opinion is controlling because his vote resulted in a majority opinion and limited testimonial evidence to matters under oath, (2) the analyst's report is inherently reliable and should therefore be admissible as a business or public record, (3) forensic witnesses are not ordinary witnesses in that they do not observe the crime or any human activity related to the crime, and (4) because Defendant could cross-examine Young, who testified about the report, Defendant's confrontation rights were not violated. We reject the State's arguments because we believe that in *Davis* a clear majority of the United States Supreme Court rejected Justice Thomas's limitation, *Melendez–Diaz* directly answers the State's second and third arguments, and Defendant could not effectively cross-examine Young, because Young did not express an opinion independent from the opinion in Champagne's forensic report.

1. JUSTICE THOMAS'S POSITION IN HIS CONCURRENCE WAS REJECTED IN THE DAVIS EIGHT JUSTICE MAJORITY OPINION.

{10} The report in this case, State's Exhibit 13, a copy of which is attached to this opinion, is a single-page report that identifies the item received by the evidence custodian, the examination requested, and the result. The forensic chemist signed the report and certified that the “report is a record of New Mexico Department of Public Safety Southern Crime Laboratory, and the contents of the report is [sic] true and correct to the best of my knowledge.” The State contends that because the report is not an affidavit, it is distinguishable from the reports held to be testimonial in *Melendez–Diaz*, and thus it does not “implicate[] the core class of testimonial statements protected by the Confrontation Clause[.]”

{11} The State relies on Justice Thomas's narrow concurring opinion and argues that his concurring opinion severely limits the *Melendez–Diaz* holding to only “formalized testimonial materials, such as affidavits, depositions*479 **1285 prior testimony, or confessions.” 557 U.S. at —, 129 S.Ct. at 2543 (Thomas, J., concurring) (internal quotation marks and citation omitted). We disagree and find it significant that in *Davis*, the United States Supreme Court noted that it would not make sense to allow the recitation of informal notes to be admitted into evidence against an accused without confrontation, while excluding affidavits simply because they are more formal.

[W]e do not think it conceivable that the protections of the Confrontation Clause can readily be evaded by having a note-taking policeman *recite* the unsworn hearsay testimony of the declarant, instead of having the declarant sign a deposition. Indeed, if there is one point for which no case-English or early American, state or federal-can be cited, that is it.

Davis, 547 U.S. at 826, 126 S.Ct. 2266. The formal affidavits in *Melendez–Diaz* “are incontrovertibly a solemn declaration of affirmation made for the purpose of establishing or proving some fact[.]” *Davis*, 547 U.S. at 826, 126 S.Ct. at 2276 (internal quotation marks and citations omitted), and represent the “paradigmatic case” implicating the “core of the right to confrontation,” but do not demarcate “its limits.” *Id.* at —, 129 S.Ct. at 2534.

[9] {12} The fact that the report at issue in the present case is not sworn to by the forensic chemist who prepared it, therefore, does not insulate it against Defendant's right of confrontation. It would be nonsensical to admit an out-of-court statement that proves an element of an offense simply because it was not a statement under oath when a sworn statement proving the same element would be inadmissible.

2. RELIABILITY

{13} The State argues, as reasoned in *Dedman*, that the chemist's report at issue is inherently reliable because it is objective and aimed at “getting to the bottom of the matter.” *See* 2004–NMSC–037, ¶¶ 24, 30, 136 N.M. 561, 102 P.3d 628 (stating that blood-alcohol reports “follow a routine manner of preparation that guarantees a certain level of comfort as to their trustworthiness” and are “made to ensure an accurate measurement”) (citation omitted). *Melendez–Diaz* directly addresses the argument that forensic reports are the product of “neutral, scientific testing.” 557 U.S. at —, 129 S.Ct. at 2536 (internal quotation marks and citation omitted). The Court noted that “[f]orensic evidence is not uniquely immune from the risk of manipulation[,]” and “sometimes [forensic analysts] face pressure to sacrifice appropriate methodology for the sake of expediency[,]” and may “alter the evidence in a manner favorable to the prosecution.” *Id.* (internal quotation marks and citation omitted). While there may be other and perhaps better methods to challenge or verify the results of a forensic test, “the Constitution guarantees one way: confrontation.” *Id.* As the Court stated in *Crawford*, “[t]he Framers would be astounded to learn that *ex parte* testimony could be admitted against a criminal defendant because it was elicited by ‘neutral’ government officers.” 541 U.S. at 66, 124 S.Ct. 1354. As *Crawford* made clear, the reliability of a testimonial statement is not a measure of its susceptibility to the right of confrontation. *See id.* at 61, 124 S.Ct. 1354 (“Admitting statements deemed reliable by a judge is fundamentally at odds with the right of confrontation.”).

[10] {14} The reliability test for testimonial evidence was abandoned when *Crawford* overruled *Ohio v. Roberts*, 448 U.S. 56, 100 S.Ct. 2531, 65 L.Ed.2d 597 (1980). 541 U.S. at 61–62, 124 S.Ct. 1354; *see also Melendez–Diaz*, 557 U.S. at —, 129 S.Ct. at 2533 (noting that the *Roberts* theory “that unconfrosted testimony was admissible as long as it bore indicia of reliability” was rejected). This Court applied the *Roberts* reliability test in *Dedman* to blood alcohol reports because we determined that the reports were non-testimonial. Following *Melendez–Diaz* and our opinion in *Bullcoming*, however, we now hold that such forensic reports^{FN1} are testimonial in nature. Therefore, any consideration *480 **1286 of their reliability is irrelevant to a determination of confrontation requirements. That Young considered himself objective and simply tried to get to the bottom of the matter have no bearing on the analysis.

FN1. Laboratory reports that only record chain of custody or the maintenance history of the machine may not offend the Confrontation Clause. *See Melendez–Diaz*, 557 U.S. at — n. 1, 129 S.Ct. at 2532 n. 1.

{15} The State also contends that the analysts' reports are not susceptible to confrontation because of their routine nature as business records under Rule 11–803(F) and as public records under Rule 11–803(H). The State argues that while the forensic chemists are government officers in this case, the forensic reports at issue are produced as part of a non-adversarial, routine process, and although they were prepared for trial, the reports were not prepared as testimony for trial. We reject this contention because Young's testimony belies the argument that the reports are not prepared as testimony and *Melendez–Diaz* refutes such an argument.

{16} Young testified that his analytical process and reporting were done in the “normal and ordinary course of business,” meaning only that such procedures and analyses are frequently conducted by the Southern Crime Laboratory. Although generating and maintaining such reports are “part of the duties and responsibilities” of the laboratory, Young testified that the majority of the work done at the laboratory is “for criminal prosecution purposes.” Indeed, Young testified that he expects that he will be called to testify in court regarding all of the reports he prepares. Testifying in a broader sense, Young was not able to think of any other purpose for the laboratory's forensic analyses, except perhaps when it receives requests from hospitals. Even in those circumstances, hospital personnel must contact a police officer to have the materials submitted to the laboratory for analysis, which indicates the prosecutorial nature of the laboratory's work. In fact, Young testified that the only way to submit materials to the laboratory for analysis is by a police officer, even though the laboratory is ostensibly open and available to the public. Further, while the forensic laboratory is no longer a division of the State Police, it operates as a technical support division of the Department of Public Safety, which oversees the State Police. *See* NMSA 1978, § 9–19–7(D) (2007). The New Mexico Administrative Code also specifies that forensic laboratory notes and reports are included in the “bar coded evidence analysis statistics and tracking database” employed by the Department of Public Safety, and consequently the State Police. *See* 1.18.790.172 NMAC (5/14/2007) (emphasis omitted); § 9–19–7(A) (“The department shall have access to all records, data and information of ... its own organizational units, not specifically held confidential by law.”). Therefore, both the facts and Young's testimony indicate that the purpose for conducting

forensic analyses and reporting the results has nothing to do with administering the agency as either a business or a separate entity, no matter how broadly defined, and everything to do with prosecuting criminal cases at trial.

{17} Next, the State's argument that the reports are admissible because they are routine under Rules 11–803(F) and (H) is answered by *Melendez–Diaz* and must be rejected. The relevant portions of Rules 11–803(F) and (H) ^{FN2} are identical to Federal Rules of Evidence 803(6) and (8), which are discussed in *Melendez–Diaz* ^{FN3}. See 557 U.S. *481 **1287 at —, 129 S.Ct. at 2538. Our analysis in *Dedman*, which was filed before the opinion in *Melendez–Diaz*, qualified the defendant's blood alcohol report as a public record under the meaning of Rule 11–803(H) on the basis of the underlying reliability and trustworthiness of the reports. *Dedman*, 2004–NMSC–037, ¶ 24, 136 N.M. 561, 102 P.3d 628 (noting that “reports follow a routine manner of preparation that guarantees a certain level of comfort as to their trustworthiness”). The *Dedman* Court reiterated our prior determination that Rule 11–803(H) is aimed at excluding “reports of law enforcement personnel engaged in investigative and prosecutorial activities.” *Dedman*, 2004–NMSC–037, ¶ 24, 136 N.M. 561, 102 P.3d 628 (internal quotation marks and citation omitted). The *Dedman* Court determined that analysts at the Scientific Laboratory Division are neither police officers nor law enforcement personnel and that the reports are “prepared in a non-adversarial setting.” *Id.* Given that nothing in the *Dedman* record indicated that standard laboratory procedures were not followed or that the results were unreliable, and given that the *Dedman* Court determined that the laboratory analysts in question were not law enforcement personnel, the Court upheld admittance of the blood alcohol report as a public record under Rule 11–803(H). *Dedman*, 2004–NMSC–037, ¶ 24, 136 N.M. 561, 102 P.3d 628.

FN2. Rule 11–803(F) provides for the admission of a memorandum, report, record or data compilation, in any form, of acts, events, conditions, opinions or diagnoses, made at or near the time by, or from information transmitted by, a person with knowledge, if kept in the course of a regularly conducted business activity, and if it was the regular practice of that business activity to make the memorandum, report, record or data compilation[.] The term “business” is defined broadly in the rule to include “business, institution, association, profession, occupation and calling of every kind, whether or not conducted for profit.” *Id.* Rule 11–803(H) provides for the admission of [r]ecords, reports, statements or data compilations, in any form, of public offices or agencies, setting forth (1) the activities of the office or agency, (2) matters observed pursuant to duty imposed by law as to which matters there was a duty to report, excluding, however, in criminal cases matters observed by police officers and other law enforcement personnel[.]

FN3. Because of the similarities between the rules, we find federal case law instructive in interpreting the state rule. *State v. Lopez*, 1997–NMCA–075, ¶ 10, 123 N.M. 599, 943 P.2d 1052.

{18} In *Melendez–Diaz*, the Supreme Court expressly rejected the argument that such reports are admissible without confrontation for being “akin to the types of official and business records admissible at common law[.]” because the Court determined that they “do not qualify as traditional official or business records” since they are specifically prepared for use at trial. 557 U.S. at —, 129 S.Ct. at 2538 (internal quotation marks and citation omitted). Quoting *Palmer v. Hoffman*, 318 U.S. 109, 114, 63 S.Ct. 477, 87 L.Ed. 645 (1943), the *Melendez–Diaz* Court reiterated its holding that such reports do “not qualify as ... business record[s] because, although kept in the regular course of ... operations, [they are] ‘calculated for use essentially in the court, not in the business.’ ” 557 U.S. at —, 129 S.Ct. at 2538. The *Palmer* Court made it clear that the business records exception, now termed “[r]ecords of regularly conducted activity,” see Fed.R.Evid. 803(6) advisory committee note, was meant to apply to “entries made systematically or as a matter of routine to record events or occurrences, to reflect transactions with others, or to provide internal controls” and that relate to the “management or operation of the business[.]” 318 U.S. at 113, 63 S.Ct. 477. Such records are considered inherently trustworthy, as opposed to records that are created as a “system of recording events or occurrences” that have “little or nothing to do with the management or operation of the business” such as “employees' versions of their accidents.” *Id.* Broadening the rule to incorporate “any regular course of conduct which may have some relationship to business ... opens wide the door to avoidance of cross-examination” because then entities could make recording certain activities that are not covered under the business records exception a routine event. *Id.* at 114, 63 S.Ct. 477 (emphasis added) (internal quotation marks omitted). Therefore, “[b]usiness and public records are generally admissible *absent confrontation*[.] ” not only because they qualify under an exception to the hearsay rules, but because they are not testimonial, “having been created for the administration of an entity's affairs and not for the purpose of establishing or proving some fact at trial.” *Melendez–Diaz*, 557 U.S. at —, 129 S.Ct. at 2539–40 (emphasis added).

[11] {19} The chemical forensic reports at issue in this case are inadmissible absent confrontation, because although it is the “business” of the Southern Crime Laboratory, a public agency, to analyze substances for narcotic content, the laboratory's purpose for preparing chemical forensic reports is for their use in court, not as a function of the laboratory's administrative activities. These reports are precisely the type of out-of-court statement that must be excluded under *Palmer*, because admitting them “opens wide the door to avoidance of cross-examination[.]” 318 U.S. at 114, 63 S.Ct. 477. As a result, Champagne's chemical forensic report and Young's testimony about her report were not admissible and violate Defendant's right of *482 **1288 confrontation if Defendant is deprived of meaningful cross-examination.

3. ORDINARY WITNESS

{20} The State also argues that Champagne is not an “ordinary” witness, because she did not “perceive[] an event that gave rise to a personal belief in some aspect of the defendant's guilt.” *Melendez–Diaz*, 557 U.S. at —, 129 S.Ct. at 2551 (Kennedy, J., dissenting). Quoting *Dedman*, the State contends that the forensic report in question, although it was prepared for trial, was created in a routine manner, was non-adversarial, and was meant to ensure accuracy, so it must be treated differently than testimonial hearsay under a Confrontation Clause analysis. 2004–NMSC–037, ¶ 30, 136 N.M. 561, 102 P.3d 628. We disagree, and hold that, to the extent *Bullcoming* overruled *Dedman*, chemical forensic reports of the type at issue in this case are testimonial, and their admission violated Defendant's right of confrontation.

[12] {21} Champagne's report, in fact, goes directly to an issue of guilt in that it identifies the white, crystal-like substance located near Defendant's hiding place as methamphetamine, a necessary element of the crime of possession of a controlled substance, for which Defendant was charged. As such, Champagne's report serves to bear testimony against Defendant, and is the functional equivalent of live, in-court testimony that would otherwise be offered directly by Champagne herself. For this reason, the prosecution must produce her for cross-examination, or admission of the report is barred by the Confrontation Clause.

{22} The State, relying on the dissent in *Melendez–Diaz*, also suggests that forensic analysts are not “ordinary witnesses” because they “observe[d] neither the crime nor any human action related to it.” 557 U.S. at —, 129 S.Ct. at 2552 (Kennedy, J., dissenting). In refuting this variation of the argument that analysts are not accusatory witnesses, *Melendez–Diaz* rejects this “novel exception” to the right of confrontation because it “would exempt all expert witnesses—a hardly ‘unconventional’ class of witnesses.” *Id.* at —, 129 S.Ct. at 2535. Encapsulated within this approach is the Court's rejection of the theory that only testimony elicited by interrogation implicates the right of confrontation. *Id.* (“The Framers were no more willing to exempt from cross-examination volunteered testimony or answers to open-ended questions than they were to exempt answers to detailed interrogation.”) (internal quotation marks and citation omitted). Whether produced through interrogation or volunteered, the analysts' affidavits in *Melendez–Diaz* “were presented in response to a police request” and “suffice [] to trigger the Sixth Amendment's protection[.]” so they “should be subject to confrontation as well.” *Id.* Similarly, Champagne's report was also presented in response to a police request and should be subject to confrontation by Defendant.

B. TRIAL TESTIMONY REGARDING THE ABSENT CHEMIST'S REPORT WAS TESTIMONIAL HEARSAY AND VIOLATED DEFENDANT'S RIGHT OF CONFRONTATION.

[13] {23} The State also contends that admission of Champagne's chemical forensic report did not violate Defendant's confrontation rights in any meaningful way because Young testified about the report and was subject to cross-examination. The State's argument would have merit if Young had expressed his own opinion based upon the underlying data that contributed to the opinion announced in the report. It is proper to “admit opinion testimony based, *in part*, upon reports of others which are not in evidence but which the expert customarily relies upon in the practice of his profession.” *State v. Chambers*, 84 N.M. 309, 311, 502 P.2d 999, 1001 (1972) (emphasis added) (internal quotation marks and citation omitted); *see also O'Kelly v. State*, 94 N.M. 74, 77, 607 P.2d 612, 615 (1980) (noting that “Rule [11–]703 [NMRA,] which governs the permissible bases upon which the opinion of an expert may be founded,” provides that experts may rely upon or otherwise base their opinions on “facts or data,” but not merely the oral or written opinions of non-testifying experts (citations omitted)). However, reliance upon such hearsay facts or data, or partial reliance upon another expert's opinion that is not in *483 **1289 evidence, to form an independent expert opinion does not necessarily make the hearsay itself admissible. *See Sewell v. Wilson*, 101 N.M. 486, 489, 684 P.2d 1151, 1154 (Ct.App.1984) (citations omitted).

{24} We have previously held that the admission into evidence of reports containing the opinions of non-testifying experts is prejudicial error. *O'Kelly*, 94 N.M. at 76, 607 P.2d at 614. In *O'Kelly*, the testifying expert simply restated the hearsay opinion of a non-testifying expert on direct examination and the testimony was admitted at trial over the defendant's objection. *Id.* On appeal, we held that the admission of the non-testifying expert's opinion was reversible error because a testifying expert is limited by Rule 11-703 to relying on "facts or data" in forming an opinion, and so is precluded from relying "upon the oral or written opinion of another expert." *O'Kelly*, 94 N.M. at 77, 607 P.2d at 615 (citations omitted); *see also Sewell*, 101 N.M. at 490, 684 P.2d at 1154 (holding that hearsay opinion letter of non-testifying expert was improperly admitted through testimony of expert because it was "opinion").

{25} The rationale for this holding is grounded in both the right of confrontation and concern for ensuring the opportunity for effective cross-examination as demonstrated by the cases relied upon by this Court in *O'Kelly*. Among the cases *O'Kelly* cited for support was *United States v. Bohle*, 445 F.2d 54 (7th Cir.1971), *overruled by United States v. Lawson*, 653 F.2d 299, 303 n. 12 (7th Cir.1981) (noting that *Bohle* "was written prior to the adoption of the Federal Rules of Evidence"), which held that a doctor's in-trial restatement of the hearsay opinion of a non-testifying expert was inadmissible because the defendant had no opportunity for effective cross-examination regarding the hearsay opinion.^{FN4} *Bohle*, 445 F.2d at 69. *Bohle* was nominally overruled by *Lawson* following adoption of the Federal Rules of Evidence in 1975,^{FN5} but the *Lawson* Court restated the same principles in even stronger language.

FN4. It should be noted that in *Bohle* the testifying expert based his opinion only in part upon the non-testifying expert's hearsay opinion, but the testifying expert's opinion still was held to be inadmissible. Our case law, however, allows partial reliance on another expert's opinion. *See Chambers*, 84 N.M. at 311, 502 P.2d at 1001. Our reliance on *Bohle* in the *O'Kelly* opinion illustrates the rationale behind our concern when an expert relies upon the opinion of another expert: The opposing party has no opportunity to cross-examine the basis for the hearsay opinion because the opinion is not the testifying expert's own opinion. This is especially true when, as is the situation in this case, the testifying expert relies *solely* on the opinion of another expert.

FN5. An Act to establish rules of evidence for certain courts and proceedings, Pub.L. No. 93-595, 88 Stat.1926 (1975) (providing that the rules enacted therein are to be known as the "Federal Rules of Evidence").

In criminal cases, a court's inquiry under Rule 703 must go beyond finding that hearsay relied on by an expert meets these standards. An expert's testimony that was based entirely on hearsay reports, while it might satisfy Rule 703, would nevertheless violate a defendant's constitutional right to confront adverse witnesses. The Government could not, for example, simply produce a witness who did nothing but summarize out-of-court statements made by others. A criminal defendant is guaranteed the right to an effective cross-examination.

Lawson, 653 F.2d at 302 (footnotes omitted). We find *Lawson's* rationale persuasive.

{26} Therefore, we must determine whether Young's testimony was an expression of his own opinion or whether he was merely parroting Champagne's opinion. Our review of the record leads us to the conclusion that Young was merely repeating the contents of Champagne's report and her opinion.

{27} Champagne's report was admitted during Young's testimony despite Defendant's objection. After reviewing the report, Young testified about Champagne's analysis and opinion, as follows:

[Prosecutor]: Okay, what is the result of that analysis?

Young: The results are methamphetamine was identified. [Prosecutor]: Okay, how much?

Young: I believe it was 1.05 grams.

[Prosecutor]: And is there a purity in that?

Young: Yes, sir.

[Prosecutor]: What's the purity?

****1290 *484** Young: It turned out at 64.3%.

{28} On cross-examination, Young acknowledged that he had neither seen, analyzed, nor treated any of the evidence Champagne used to create her report. He testified that he had not weighed the evidence, nor had he conducted gas chromatography or mass spectrometry on it. Young further testified that (1) he had not done a purity analysis of the substance, (2) he had not performed any chemical testing on it, and (3) he had not supervised Champagne's analytical work. Rather, he testified ambiguously on cross-examination that "all I can do is look at the

evidence and what [sic] I agree with her results. That's all I can do and from her results and testing materials and notes I agree with what she has.”

{29} It is not clear from Young's testimony whether he relied upon his own analysis of the underlying facts and data contributing to Champagne's opinion to arrive at his own, independent conclusion. A fair reading of the transcript shows that Young's testimony was a restatement of Champagne's conclusory opinion regarding the narcotic content of the substance, its weight, and its purity as stated in her hearsay report marked Exhibit 13. The prosecutor never asked Young whether he had analyzed the raw data that contributed to the opinion in Exhibit 13, nor was Young asked whether he had an opinion regarding whether the substance was a narcotic and, if so, the degree of its purity.

{30} The determinations of whether a substance is narcotic and its degree of purity—two conclusions that presumably require some expert judgment to compare the computerized analytical results with reference data—must be classified as “opinion,” rooted in the assessment of one who has specialized knowledge and skill. Champagne ostensibly used her training, skill, and knowledge to form an opinion that the substance in question was methamphetamine. Cf. *Bullcoming*, 2010–NMSC–007, ¶ 25 (holding that the results of the gas chromatograph BAC test do not constitute expert opinion, but rather constitute “facts and data” of the type reasonably relied upon by experts). That expert determination was in turn employed by the prosecution to prove one element of the crime with which Defendant was charged. Defendant therefore had a right to challenge the judgment and conclusions behind Champagne's opinion. Because she did not testify, her opinion could not be effectively challenged. See *Vermont v. Towne*, 142 Vt. 241, 453 A.2d 1133, 1135 (1982) (holding that admission of non-testifying expert's opinion through testifying expert's testimony precluded cross-examination and violated Confrontation Clause).

{31} The State would have us hold that forensic chemists and their testimony are fungible for purposes of the Confrontation Clause. The State's argument seems to be that Champagne would have given the same testimony as did Young because she would have been relying upon her report to the same extent that Young relied upon it. Citing the Court of Appeals opinion in *State v. Christian*, 119 N.M. 776, 783, 895 P.2d 676, 683 (Ct.App.1995), the State argues that Champagne probably would not have remembered preparing Defendant's report and probably would have relied upon her laboratory notes to testify. Thus, the State contends that Young was equally qualified to “interpret” Champagne's notes, which were available for Defendant to examine, so he could properly stand in her place to testify without any “meaningful” interference with Defendant's right of confrontation.

[14][15] {32} We hold that the *Christian* confrontation analysis is no longer sound. *Christian* was decided before *Crawford* and *Melendez–Diaz*, so its confrontation analysis, based on necessity and reliability, is no longer good law. See *Christian*, 119 N.M. at 782, 895 P.2d at 682 (“The confrontation clause places two conditions on the admission of hearsay evidence: necessity and reliability.”). As we described earlier in this opinion, the confrontation analysis has become more sharply focused since *Crawford*. 541 U.S. at 59, 124 S.Ct. 1354 (“Testimonial statements of witnesses absent from trial have been admitted only where the declarant is unavailable, and only where the defendant has had a prior opportunity to cross-examine.”). Neither necessity nor reliability now function as exceptions to the Confrontation Clause requirement of cross-examination. See *United *485 **1291 States v. Gonzalez–Lopez*, 548 U.S. 140, 146, 126 S.Ct. 2557, 165 L.Ed.2d 409 (2006) (“We rejected that [indicia of reliability] argument ... in *Crawford v. Washington*, 541 U.S. 36, 124 S.Ct. 1354, 158 L.Ed.2d 177 (2004), saying that the Confrontation Clause ‘commands, not that evidence be reliable, but that reliability be assessed in a particular manner: by testing in the crucible of cross-examination.’”). The only possible exception mentioned in *Crawford* is a testimonial statement made by a child victim of sexual assault. 541 U.S. at 58 n. 8, 124 S.Ct. 1354. Because such statements are not at issue in this case, we hold that the State's reliance on *Christian* is misplaced. Experts and their opinions are not fungible when the testifying expert has not formed an independent conclusion from the underlying facts or data, but merely restates the hearsay opinion of a non-testifying expert.

[16] {33} Young's testimony regarding Champagne's report violated Defendant's right of confrontation because it introduced Champagne's opinion, not his. Because it was Champagne's opinion, Defendant was entitled to cross-examine Champagne on a number of issues, including what test she performed, whether the test was routine, whether the test results required interpretation and the exercise of judgment, the use of skills she did not possess, any bias she might have, the risks of error in interpreting the results, and whether she made such errors. Had Young unequivocally testified that it was his opinion that the substance at issue was methamphetamine weighing 1.05 grams with a 64.3% purity, Defendant could have cross-examined him concerning these opinions. The basis for such opinion might have been the underlying data and Champagne's notes if Young testified that these are the types of facts or data reasonably relied upon by chemical forensic experts in forming opinions. See Rule 11–703. Indeed, the

underlying data and notes may have been admitted consistent with Rule 11–703 had the court determined “that their probative value in assisting the jury to evaluate the expert's opinion substantially outweigh[ed] their prejudicial effect.” *Id.* Under such circumstances, Defendant would have had the opportunity to effectively cross-examine Young, and his right to confrontation would not have been violated.

C. ADMISSION OF THE HEARSAY REPORTS AND TESTIMONY WAS HARMLESS ERROR.

[17] {34} As its final argument, the State contends that any error in admitting Champagne's report was harmless error beyond a reasonable doubt. Defendant maintains, without arguing the matter, that the admissions were not harmless. We reject Defendant's unsupported argument and hold that the admissions were harmless error.

[18][19][20] {35} “[A] reviewing court should only conclude that a [] [constitutional] error is harmless when there is no reasonable possibility it affected the verdict.” *State v. Barr*, 2009–NMSC–024, ¶ 53, 146 N.M. 301, 210 P.3d 198 (internal quotation marks and citations omitted). Three factors may be considered when determining whether constitutional error meets the standard of harmlessness. *Id.* ¶ 55. “No one factor is determinative; rather, they are considered in conjunction with one another.” *Id.*

The factors are whether there is: (1) substantial evidence to support the conviction without reference to the improperly admitted evidence; (2) such a disproportionate volume of permissible evidence that, in comparison, the amount of improper evidence will appear minuscule; and (3) no substantial conflicting evidence to discredit the State's testimony.

Id. ¶ 56 (footnote omitted). “[W]hen assessing the harmfulness of error, it is not the role of the appellate court to reweigh the evidence against a defendant[.]” *Id.* ¶ 57. Therefore, “[t]he harmless error analysis does not center on whether, in spite of the error, the right result was reached. Rather, the focus is on whether the verdict was impacted by the error.” *Id.* “Weighing these factors, a court must decide if it can conclude with the requisite level of certainty that an error did not contribute to the jury's verdict.” *State v. Macias*, 2009–NMSC–028, ¶ 39, 146 N.M. 378, 210 P.3d 804.

{36} Under the facts of this case, we determine that there was no reasonable possibility*486 **1292 that the improperly-admitted evidence affected the verdict. Even if Exhibit 13 had been excluded, as well as Young's testimony on Champagne's opinion and conclusions, the record still establishes that there was sufficient evidence for a jury to convict Defendant on the single count of possession of a controlled substance. Young's testimony regarding his independent conclusion in Exhibit 12 ^{FN6} that the larger bag found in the jacket pocket contained methamphetamine, based on his own chemical analysis, provided a sufficient, independent basis, without reference to the improperly-admitted evidence, for the jury to find Defendant guilty of possessing methamphetamine. Defendant was charged with one count of possession in violation of NMSA 1978, Section 30–31–23(D) (1972) (amended 2005). “Section 30–31–23 is unambiguous; a plain reading of the provision indicates that any clearly identifiable amount of a controlled substance is sufficient evidence to support a conviction for possession of a controlled substance.” *State v. Wood*, 117 N.M. 682, 685, 875 P.2d 1113, 1116 (Ct.App.1994). There was no evidence that contradicted Young's testimony regarding the larger bag of methamphetamine and Defendant has not argued that the evidence was not sufficient to support a finding that he was in possession of the jacket. Proof beyond a reasonable doubt that one of the two bags contained methamphetamine was all that was necessary to sustain the conviction. Therefore, the effect of excluding evidence relating to the smaller bag would have been inconsequential. Admission of the Champagne report was harmless error beyond a reasonable doubt.

FN6. Defendant abandoned his argument raised in the district court that Exhibit 12 is inadmissible hearsay, so we do not address that issue.

III. CONCLUSION

{37} For the foregoing reasons, we conclude that Champagne's chemical forensic report and Young's trial testimony regarding that report violated Defendant's right of confrontation and were inadmissible. Nonetheless, we find the error of their admission harmless and affirm Defendant's conviction.

{38} **IT IS SO ORDERED.**

United States Court of Appeals,
Fourth Circuit.
UNITED STATES of America, Plaintiff-Appellee,
v.
Donna Conzuella JOHNSON, Defendant-Appellant.
United States of America, Plaintiff-Appellee,
v.
John Albert Martin, Jr., Defendant-Appellant.
United States of America, Plaintiff-Appellee,
v.
Craig Arnold Scott, a/k/a Craig Levi, Defendant-Appellant.

Nos. 06-4391, 06-4392, 06-4527.

Argued: Sept. 24, 2009.

Decided: Dec. 2, 2009.

OPINION

WILKINSON, Circuit Judge:

Donna C. Johnson, Craig A. Scott, and John A. Martin were convicted of conspiracy and other offenses in relation to the distribution of narcotics. On appeal, they raise various claims, some collectively and others individually. After careful consideration, we find that these claims lack merit, and we affirm the judgment of the district court.

I.

This case involves an extensive drug-trafficking organization that operated in Maryland, the District of Columbia, New York, and elsewhere. The major figures in this organization included Paulette Martin, Gwendolyn Levi, and Moises Uriarte. From March until June 2004, investigators,*⁶²⁹ acting with court authorization, tapped Paulette Martin's phone lines. From these wiretaps, they learned that Paulette Martin was obtaining heroin from Levi. As a result, they obtained authorization to tap Levi's cellular phone line and intercepted her communications with her heroin supplier, Uriarte. In June 2004, the investigation culminated in the arrest of over thirty individuals and the execution of over twenty search warrants.

Johnson, Scott, and John Martin were each tied to the organization in different ways. Johnson accompanied Levi to purchase heroin from Uriarte on at least one occasion. On April 23, 2004, officers observed Johnson and Levi drive from Levi's Maryland residence to a furniture store in New York City to meet Uriarte. Levi entered the store carrying a box containing about a quarter of a million dollars and exited with a gift-wrapped package that she placed in the trunk of the vehicle. That night, Johnson and Levi drove back into Maryland, where state police pulled them over. The police searched the trunk and seized the package, which contained approximately 2300 grams of heroin. Johnson and Levi were then arrested.

Scott is Levi's son. Calls intercepted in April 2004 revealed that he helped Levi process and distribute heroin. On one occasion, he complained to Levi that several of his heroin customers were "on hold." Levi instructed him to obtain fifty grams of heroin from her basement, and he later confirmed that he had done so. On another occasion, Levi asked Scott to go to her house and package some heroin for distribution, which Scott later confirmed he had done. Subsequent to Levi's arrest, officers executed a search warrant at her home and found a heroin processing operation in her basement, the location from which she had directed Scott to obtain the heroin.

John Martin resided with Paulette Martin in Maryland and helped her distribute cocaine and heroin.^{FN*} Investigators intercepted numerous phone calls in which John Martin discussed his drug-trafficking activities with Paulette Martin and others. On one occasion, John Martin and Paulette Martin discussed moving her drug supply from their residence to a performing arts school, which Paulette Martin used as a front for various illegal activities. On June 1, 2004, officers executed search warrants at both their residence and the school. At the residence, they

discovered, among other things, cocaine, cocaine base, over \$7000 in cash, a digital scale, and a sheet of paper indicating money owed to "Gwen." They also recovered a black shaving kit, containing heroin, cocaine, and an employment check in John Martin's name. At the school, they discovered, among other things, more cocaine, cocaine base, and heroin-much of which was packaged for distribution.

FN* According to Martin's brief, he and Paulette Martin have never been married and are not related.

Johnson, Scott, and John Martin were among many individuals indicted in connection with this drug conspiracy in the United States District Court for the District of Maryland. The three were tried together in November and December 2005. On December 22, 2005, a jury convicted all three defendants of conspiring to distribute and possess with intent to distribute controlled substances in violation of 21 U.S.C. § 846 (2006). In addition, Johnson was convicted of traveling in interstate commerce in the commission of unlawful activity in violation of 18 U.S.C. § 1952 and possession with intent to distribute *630 heroin in violation of 21 U.S.C. § 841. Scott was convicted of the use of a communications device to facilitate narcotics trafficking in violation of 21 U.S.C. § 843(b) and possession with intent to distribute heroin in violation of 21 U.S.C. § 841. Lastly, the jury convicted Martin of three counts of the use of a communications device to facilitate narcotics trafficking in violation of 21 U.S.C. § 843(b).

The district court sentenced Johnson to 135 months imprisonment and five years supervised release, Scott to 150 months imprisonment and five years supervised release, and Martin to 375 months imprisonment and ten years supervised release.

On appeal, Johnson, Scott, and Martin raise various claims, some collectively and some individually. Collectively, they contend, first, that the district court abused its discretion by not granting a mistrial when a government witness refused to testify and, second, that they were prejudiced by prosecutorial vouching during closing argument. Individually, Johnson challenges the sufficiency of the evidence supporting her three convictions. Also individually, Martin challenges the admission of expert testimony and a prior conviction. He also raises two sentencing issues. We address these claims in turn and set forth additional facts as they become necessary.

II.

*** SECTIONS OF OPINION OMITTED ***

*633 V.

Martin raises four individual claims. First, he contends that the district court admitted the testimony of two expert witnesses in violation of his Sixth Amendment right "to be confronted with the witnesses against him" because the experts based their opinions in part on testimonial statements from unidentified declarants.

A.

As noted above, the government received court authorization and intercepted telephone calls between various members of the drug conspiracy. To help the jury interpret those calls at trial, the government presented two police officers, Sergeant Christopher Sakala and Corporal Thomas Eveler, as experts on the subject *634 of drug trafficking. Both officers had extensive training and experience, and Martin does not question their qualifications.

Sakala and Eveler testified that several seemingly innocuous terms used in these calls, such as "tickets" and "T-shirts," were actually code words for narcotics. Sakala explained how he reached his conclusions. Because drug traffickers frequently use code words to avoid detection, he looked for "pat terns of conversation[] that [did not] make sense." J.A. 161. For example, members of this conspiracy often discussed buying and selling large numbers of "tickets" but did not specify "which shows they wanted tickets for where they wanted to sit, [or] what days they wanted to go to the show." J.A. 162. Therefore, it became "obvious" in his view that "tickets" was a code word for narcotics. *Id.*

Likewise, Eveler explained that he decoded the conversations by looking for unusual "pattern[s] of speech." J.A. 416. During Eveler's cross-examination, the following occurred. Eveler was asked if he was basing his conclusions on "con text, ... the manner of speaking and a variety of other matters," and he responded:

Yes, I'm basing it on the context-as you said, I'm basing it on other events occurring around the time of the intercepted call. I'm basing it on the known nature of the organization. I'm basing it on informant information, on interviews I've done, on evidence that was seized and on the entire-on all the facts that were developed the course of the investigation.

J.A. 740. Martin then objected that Eveler was presenting testimonial hearsay to the jury. The district court overruled the objection, explaining:

Someone who gives opinions on the meanings of terms of drug transactions has got to rely upon not just what they've heard on a particular tape but upon their experience in the field of drug communications and that may have come about through being on the streets. These are things that form their expertise. I think it's more than the scope of traditional expert testimony for him to rely upon some things. I'm not going to allow him to come in here and testify to the things that would be classic hearsay testimony about what someone else in this case told him, ... that's not what I'm going to do. I think the foundation for the opinions he gives can include information he learns through activities on the streets and through discussions with informants in a general sense of how drug people communicate with each other.

J.A. 743-44.

Later in the trial, Sakala took the stand again. On direct examination, he explained that he considered several sources of information, such as evidence that had been seized during the investigation, before reaching a conclusion about the meaning of a particular conversation. In addition, he took into account "interviews with witnesses, cooperators, [and] cooperating defendants." J.A. 1170. Martin again objected, and the district court overruled on the same grounds as above.

[10] On appeal, Martin contends that the district court's rulings violated the Confrontation Clause as interpreted by *Crawford v. Washington*, 541 U.S. 36, 124 S.Ct. 1354, 158 L.Ed.2d 177 (2004), because the experts based their opinions on testimonial interviews with informants and cooperating witnesses.

B.

[11][12] In *Crawford*, the Supreme Court held that the Confrontation Clause bars the "admission of testimonial statements*635 of a witness who did not appear at trial unless he was unavailable to testify, and the defendant had a prior opportunity for cross-examination." 541 U.S. at 53-54, 124 S.Ct. 1354. "[F]or a statement to be testimonial, the declarant must have had a reasonable expectation that his statements would be used prosecutorially...." *United States v. Udeozor*, 515 F.3d 260, 269 (4th Cir.2008). *Crawford* forbids the introduction of testimonial hearsay as evidence in itself, but it in no way prevents expert witnesses from offering their independent judgments merely because those judgments were in some part informed by their exposure to otherwise inadmissible evidence.

An expert witness's reliance on evidence that *Crawford* would bar if offered directly only becomes a problem where the witness is used as little more than a conduit or transmitter for testimonial hearsay, rather than as a true expert whose considered opinion sheds light on some specialized factual situation. Allowing a witness simply to parrot "out-of-court testimonial statements of cooperating witnesses and confidential informants directly to the jury in the guise of expert opinion" would provide an end run around *Crawford*. *United States v. Lombardozzi*, 491 F.3d 61, 72 (2d Cir.2007). For this reason, an expert's use of testimonial hearsay is a matter of degree. See Ross Andrew Oliver, Note, *Testimonial Hearsay as the Basis for Expert Opinion: The Intersection of the Confrontation Clause and Federal Rule of Evidence 703 After Crawford v. Washington*, 55 Hastings L.J. 1539, 1560 (2004) (describing a "continuum of situations" in which experts rely on testimonial hearsay). The question is whether the expert is, in essence, giving an independent judgment or merely acting as a transmitter for testimonial hearsay. As long as he is applying his training and experience to the sources before him and reaching an independent judgment, there will typically be no *Crawford* problem. The expert's opinion will be an original product that can be tested through cross-examination.

This is as it should be because expert witnesses play a valuable role in our criminal justice system. As recognized in Federal Rule of Evidence 702, experts often "assist the trier of fact to understand the evidence or to determine a fact in issue." To better fulfill this role, experts are permitted to consider otherwise inadmissible evidence as long as it is "of a type reasonably relied upon by experts in the particular field." Fed.R.Evid. 703. Some of the information experts typically consider surely qualifies as testimonial under *Crawford*. Were we to push

Crawford as far as Martin proposes, we would disqualify broad swaths of expert testimony, depriving juries of valuable assistance in a great many cases. Here, for example, it was permissible for the district court to conclude that the expert testimony would help the jury understand exchanges that might otherwise appear nonsensical or impenetrable.

It is nonetheless appropriate for district courts to recognize the risk that a particular expert might become nothing more than a transmitter of testimonial hearsay and exercise their discretion in a manner to avoid such abuses. Turning to the facts here, there is no question that Sakala and Eveler did not become mere transmitters of testimonial hearsay. Assuming for the sake of argument that the interviews they considered were testimonial, the experts never made direct reference to the content of those interviews or even stated with any particularity what they learned from those interviews. Instead, each expert presented his independent judgment and specialized understanding to the jury. That understanding was not surprisingly the product of the accumulation of experience*636 over many years of investigation of narcotics organizations and contacts with the informants and witnesses who operate within them. Sakala and Eveler explained how, based on their knowledge of narcotics trafficking, they were able to identify odd conversational patterns in the phone calls and decipher various code words. The fact that their expertise was in some way shaped by their exposure to testimonial hearsay does not mean that the Confrontation Clause was violated when they presented their independent assessments to the jury. Because they did not become mere conduits for that hearsay, their consideration of it poses no *Crawford* problem.

This case differs, for example, from the Second Circuit's case in *United States v. Mejia*, 545 F.3d 179 (2d Cir.2008). In that case, an expert stated, among other things, that a gang "taxed" non-gang members who wanted to deal drugs in bars controlled by the gang. The expert explained that he was told this important fact "by a gang member" during a custodial interview. *Id.* at 188. In other words, the expert simply passed along an important testimonial fact he learned from a particular interview. Thus, it was hard to believe that he applied any independent expertise to the substance of his testimony. *Id.* at 199. Nothing of that sort happened here, however. The experts were applying their expertise, derived over many years and from multiple sources, to interpret the transcripts of phone conversations. And the district court took pains to guard against the danger that the experts would become, in essence, mere conduits for testimonial hearsay. As it explained with regard to Officer Sakala, "He is not being asked to provide what someone else told him. He is using his information and his experience and whatever other information he may have derived from his investigation to interpret what is being said during this phone call...." J.A. 1171.

In addition to providing independent judgments, the experts in this case were in fact subject to cross-examination, as required by the Confrontation Clause. This availability for cross-examination sets the circumstances here apart from those presented in *Melendez-Diaz v. Massachusetts*, --- U.S. ---, 129 S.Ct. 2527, 174 L.Ed.2d 314 (2009). There, the government produced an expert's testimony in the form of an affidavit but did not put the expert on the stand or demonstrate both that the expert was unavailable and the defendant had a prior opportunity to cross-examine him. *Id.* at 2532. Here, however, both experts took the stand. Therefore, Martin and his co-defendants, unlike the defendant in *Melendez-Diaz*, had the opportunity to test the experts' "honesty, proficiency, and methodology" through cross-examination. *Id.* at 2538. And judging from the record, they did so effectively. For example, Sakala conceded during cross-examination that there were some conversations in which the word "tickets" was actually being used in its normal sense. This situation was, therefore, a far cry from the one in *Melendez-Diaz* where the expert was nowhere to be found.

Where, as here, expert witnesses present their own independent judgments, rather than merely transmitting testimonial hearsay, and are then subject to cross-examination, there is no Confrontation Clause violation. Accordingly, we find no error in the admission of Sakala and Eveler's testimony.

***** SECTIONS OF OPINION OMITTED *****

***640 IX.**

Because the claims raised by the defendants are without merit, the judgment of the district court is

AFFIRMED.

U.S. Court of Appeals for the Armed Forces.
UNITED STATES, Appellee,
v.
Joshua C. BLAZIER, Senior Airman, U.S. Air Force, Appellant.

No. 09-0441.
Crim.App. No. 36988.
Argued Sept. 27, 2010.
Decided Dec. 1, 2010.

Judge RYAN delivered the opinion of the Court.

In *United States v. Blazier (Blazier I)*, 68 M.J. 439 (C.A.A.F.2010), we considered the admissibility of two multi-page drug testing reports from the Air Force Institute for Operational Health, Drug Testing Division (“the Brooks Lab”) in light of *Melendez-Diaz v. Massachusetts*, — U.S. —, 129 S.Ct. 2527, 174 L.Ed.2d 314 (2009). Each report included (1) a cover memorandum summarizing the tests the urine samples were subjected to and the results of those tests, and (2) attached records, the vast majority of which were printouts of the machine-generated data from the drug tests and machine calibrations, along with a specimen custody document, intralaboratory chain of custody documents for each of the laboratory tests conducted, presumptive positive reports, and occasional handwritten annotations.

The cover memoranda, prepared in response to a Government request for use at court-martial, list the results and the corresponding Department of Defense cutoff levels for illegal substances, followed by the certification and signature of a “Results Reporting Assistant, Drug Testing Division”: Marina Jaramillo for the June test and Andrea P. Lee for the July test. The bottom portion of each memorandum is a signed and sworn declaration by Dr. Vincent Papa, the “Laboratory Certifying Official,” confirming the authenticity of the attached records and stating that they were “made and kept in the course of the regular conducted activity” at the Brooks Lab.

The drug testing reports, including the cover memoranda, were admitted into evidence over defense objection made in a motion *in limine* on Confrontation Clause and hearsay grounds. Dr. Papa testified at trial about procedures at the Brooks Lab and the *221 different urinalysis tests conducted at the lab. He also testified about the drug testing reports, explaining the significance of nearly every page and often repeating the substance contained on them. Dr. Papa stated that based upon his review of the reports, as well as his knowledge, training, and experience, the drug tests were reliable and that Appellant had tested positive for methamphetamine and marijuana. The defense objected to this testimony in its motion *in limine* on the ground that its substance was inadmissible hearsay in violation of the Confrontation Clause and Military Rule of Evidence (M.R.E.) 801.

We held in *Blazier I* that “at least the top portion of the drug testing report memoranda ... were testimonial.”^{FN1} 68 M.J. at 443. As we explained:

FN1. The Government did not appeal this holding, which is the law of the case. See *United States v. Erickson*, 65 M.J. 221, 224 n. 1 (C.A.A.F.2007) (holding that when a ruling is not appealed, it “will normally be regarded as the law of the case and binding upon the parties”). In any event, we are satisfied that the signed, certified cover memoranda—prepared at the request of the Government for use at trial, and which summarized the entirety of the laboratory analyses in the manner that most directly “bore witness” against Appellant—are testimonial under current Supreme Court precedent. See *Melendez-Diaz*, 129 S.Ct. at 2532; *Crawford v. Washington*, 541 U.S. 36, 51–53, 124 S.Ct. 1354, 158 L.Ed.2d 177 (2004).

Similar to the sworn certificates of analysis in *Melendez-Diaz*, the top portion of the drug testing report cover memoranda in this case identify the presence of an illegal drug and indicate the quantity present. And the evidentiary purpose of those memoranda was apparent, as they not only summarize and digest voluminous data but were generated in direct response to a request from the command indicating they were needed for use at court-martial. This is true regardless of the impetus behind the testing, the knowledge of those conducting laboratory

tests at different points in time, or whether the individual underlying documents are themselves testimonial.

In another respect, however, the cases are distinct. In *Melendez-Diaz*, the certificates were introduced as evidence without more: no one was subject to cross-examination about the testing, procedures, or quality control, for example, with respect to the results upon which the certificates were based. *See id.* at 2531. Here, while Dr. Papa did not personally perform or observe the testing (other than reviewing the bottle label for the first sample) or author the cover memoranda, he was the certifying official for the drug testing reports and was recognized as an expert in “the field of pharmacology area of drug testing and forensic toxicology,” without defense objection.

Id. (footnote omitted).

Dr. Papa was qualified as an expert in “ ‘the field of pharmacology area of drug testing and forensic toxicology,’ ” under M.R.E. 703 without defense objection and testified in that capacity. *Id.* Neither Jaramillo nor Lee testified; no showing was made that either individual was unavailable or had been previously subject to cross-examination. *Id.* at 440 n. 2.

We thus invited briefing from the parties on the following issues:

While the record establishes that the drug testing reports, as introduced into evidence by the prosecution, contained testimonial evidence (the cover memoranda of August 16), and the defense did not have the opportunity at trial to cross-examine the declarants of such testimonial evidence,

(a) was the Confrontation Clause nevertheless satisfied by testimony from Dr. Papa? *See, e.g., Pendergrass v. Indiana*, 913 N.E.2d 703, 707–08 (Ind.2009). *But see, e.g., State v. Locklear*, 363 N.C. 438, 681 S.E.2d 293, 304–05 (N.C.2009); or

(b) if Dr. Papa's testimony did not itself satisfy the Confrontation Clause, was the introduction of testimonial evidence nevertheless harmless beyond a reasonable doubt under the circumstances of this case if he was qualified as, and testified as, an expert under M.R.E. 703 (noting that “[i]f of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject, the facts or data [upon *222 which the expert relied] need not be admissible in evidence in order for the opinion or inference to be admitted”)? *Compare, e.g., United States v. Turner*, 591 F.3d 928, 933–34 (7th Cir.2010), and *United States v. Moon*, 512 F.3d 359, 362 (7th Cir.2008), with *United States v. Mejia*, 545 F.3d 179, 197–98 (2d Cir.2008).

Id. at 444. We consider these issues below.

I.

[1] The Sixth Amendment provides: “In all criminal prosecutions, the accused shall enjoy the right ... to be confronted with the witnesses against him....” U.S. Const. amend. VI. Accordingly, no testimonial hearsay may be admitted against a criminal defendant unless (1) the witness is unavailable, and (2) the witness was subject to prior cross-examination. *Crawford*, 541 U.S. at 53–54, 124 S.Ct. 1354. The outcome of this case depends on answers to three questions. The first question is whether the Confrontation Clause is satisfied with respect to the testimonial hearsay of Jaramillo and Lee contained in the cover memoranda in light of the fact that Dr. Papa—who was at least as knowledgeable as the declarants about both procedures at the Brooks Lab generally and, in the Government's view, the substance of their testimony (i.e., the “substitute witness”^{FN2} or “surrogate witness”^{FN3} theory)—was subject to cross-examination at trial. If the Confrontation Clause was not satisfied, the second question is what Dr. Papa could and did rely upon and convey in testifying that it was his expert opinion that Appellant's samples “were subjected to valid, reliable, scientific and forensic tests” and that methamphetamine and marijuana “were accurately detected.” Finally, and relatedly, if evidence was introduced at trial in violation of the Sixth Amendment right to confrontation, the remaining question is whether such constitutional violation was nullified because Dr. Papa was qualified as and testified as an expert under M.R.E. 702 and M.R.E. 703.

FN2. *See People v. Benitez*, 106 Cal.Rptr.3d 39, 45 (Cal.Ct.App.2010) (describing a laboratory supervisor testifying in place of the analyst as a “substitute witness”), *review granted and opinion superseded by 109*

Cal.Rptr.3d 329, 230 P.3d 1117 (Cal.2010).

FN3. See Jennifer L. Mnookin, *Expert Evidence and the Confrontation Clause After Crawford v. Washington*, 15 J.L. Pol'y 791, 834 (2007) (describing a reliable witness other than the declarant as a “surrogate”).

[2][3][4] We hold that where testimonial hearsay is admitted, the Confrontation Clause is satisfied only if the declarant of that hearsay is either (1) subject to cross-examination at trial, or (2) unavailable and subject to previous cross-examination. We further hold that an expert may, consistent with the Confrontation Clause and the rules of evidence, (1) rely on, repeat, or interpret admissible and nonhearsay machine-generated printouts of machine-generated data, see, e.g., *Moon*, 512 F.3d at 362; *United States v. Washington*, 498 F.3d 225, 230–31 (4th Cir.2007), and/or (2) rely on, but not repeat, testimonial hearsay that is otherwise an appropriate basis for an expert opinion, so long as the expert opinion arrived at is the expert's own, see, e.g., *United States v. Ayala*, 601 F.3d 256, 275 (4th Cir.2010) (quoting *United States v. Johnson*, 587 F.3d 625, 635 (4th Cir.2009)); *Mejia*, 545 F.3d at 198; *United States v. Law*, 528 F.3d 888, 912 (D.C.Cir.2008). However, the Confrontation Clause may not be circumvented by an expert's repetition of otherwise inadmissible testimonial hearsay of another. *Mejia*, 545 F.3d at 198.

II.

[5][6] As a threshold matter, we consider whether the admission of the testimonial hearsay of Jaramillo and Lee was “cured” because Dr. Papa testified and was subject to cross-examination. We hold that it was not.

[7] While reasonable minds may disagree about what constitutes testimonial hearsay, there can be no disagreement about who is the “witness” the accused has the right to confront. That “witness” is the declarant. See *Crawford*, 541 U.S. at 51, 124 S.Ct. 1354 (“The text of the Confrontation Clause ... applies to ‘witnesses’ against the accused—in *223 other words, those who ‘bear testimony.’” (quoting 2 N. Webster, *An American Dictionary of the English Language* (1828))); *id.* at 59, 124 S.Ct. 1354 (“Testimonial statements of witnesses absent from trial have been admitted only where the declarant is unavailable, and only where the defendant has had a prior opportunity to cross-examine.”); *Melendez–Diaz*, 129 S.Ct. at 2537 n. 6 (“The analysts who swore the affidavits provided testimony against Melendez–Diaz, and they are therefore subject to confrontation.”). Accordingly, the right of confrontation is not satisfied by confrontation of a surrogate for the declarant. See, e.g., *United States v. Martinez–Rios*, 595 F.3d 581, 586 (5th Cir.2010); *Locklear*, 681 S.E.2d at 305; *Commonwealth v. Avila*, 454 Mass. 744, 912 N.E.2d 1014, 1029 (2009).

[8] Furthermore, “reliability” is no substitute for this right of confrontation. As the Supreme Court explained,

Where testimonial statements are involved.... [The Sixth Amendment] commands, not that evidence be reliable, but that reliability be assessed in a particular manner: by testing in the crucible of cross-examination. The Clause thus reflects a judgment, not only about the desirability of reliable evidence ... but about how reliability can best be determined.

Crawford, 541 U.S. at 61, 124 S.Ct. 1354; see also *Melendez–Diaz*, 129 S.Ct. at 2536 (“Respondent and the dissent may be right that there are other ways—and in some cases better ways—to challenge or verify the results of a forensic test. But the Constitution guarantees one way: confrontation. We do not have license to suspend the Confrontation Clause when a preferable trial strategy is available.”). While “reliability” is the end, the right of confrontation is the means, and it is the means (rather than the end) that the Sixth Amendment insists upon.

[9] The Government nonetheless argues that admission of the testimonial hearsay of Jaramillo and Lee did not violate the Confrontation Clause because Dr. Papa was “the more logical and ideal witness from the lab,” and “a properly and fully qualified expert witness ... ideally suited to explain, interpret, and admit Appellant's drug tests.” But *Crawford* overruled the “particularized guarantees of trustworthiness” test established in *Ohio v. Roberts*, 448 U.S. 56, 66, 100 S.Ct. 2531, 65 L.Ed.2d 597 (1980), and abandoned the focus on substantive reliability in favor of the inexorable demand for cross-examination of the declarant of testimonial hearsay. Thus, while no one questions Dr. Papa's status as a qualified expert, this does not permit him to convey the testimonial hearsay of others. Substitute means of ensuring reliability do not satisfy the Confrontation Clause, no matter how efficacious they

might be.

Some of the cases the Government cites to the contrary are distinguishable from this case in that they either (1) consider out-of-court statements that, unlike the hearsay we held testimonial in *Blazier I*, were deemed not testimonial, *see, e.g., People v. Lovejoy*, 235 Ill.2d 97, 335 Ill.Dec. 818, 919 N.E.2d 843, 869–70 (2009); *State v. Appleby*, 289 Kan. 1017, 221 P.3d 525, 551 (2009); or (2) deal not with the admission of testimonial hearsay, as happened in this case, but with expert reliance on that unadmitted hearsay in forming opinions, *Turner*, 591 F.3d at 934 (noting that the hearsay relied upon “was not admitted into evidence, let alone presented to the jury in the form of a sworn affidavit, ‘functionally identical to live, in-court testimony....’ ” (quoting *Melendez–Diaz*, 129 S.Ct. at 2532)).

And contrary to the Government's view on the precedential value of a denial of certiorari, *see Teague v. Lane*, 489 U.S. 288, 296, 109 S.Ct. 1060, 103 L.Ed.2d 334 (1989); Eugene Gressman et al., *Supreme Court Practice* 334 (9th ed.2007), we are not bound by the Supreme Court of Indiana's decision in *Pendergrass*, 913 N.E.2d at 707–08, *cert. denied*, — U.S. —, 130 S.Ct. 3409, 177 L.Ed.2d 323 (2010). The Supreme Court of Indiana found that, under *Melendez–Diaz*, the statements of two non-testifying declarants were testimonial, *id.* at 707, but went on to hold that the right of confrontation was satisfied because the defendant “had the opportunity to confront at trial two witnesses who were directly involved in the substantive analysis, unlike *Melendez–Diaz*, who confronted none *224 at all,” *id.* at 708. Of course, in this case Dr. Papa was not personally or directly involved in the substantive analyses at all. Moreover, we respectfully disagree with the principle the Government draws from *Pendergrass*—that “the chief mechanism for ensuring reliability of evidence is ... cross-examination” of *someone*. *See id.* That principle is incompatible with both *Crawford* and *Melendez–Diaz*; the right of confrontation is the right to confront and cross-examine the “witness” who made the “testimonial” statement.

In short, we hold that cross-examination of Dr. Papa was not sufficient to satisfy the right to confront Jaramillo and Lee, and the introduction of their testimonial statements as prosecution exhibits violated the Confrontation Clause.

III.

The answer to the question whether Dr. Papa's testimony satisfied the Confrontation Clause with respect to the admission of the testimonial hearsay of Jaramillo and Lee in the cover memoranda does not answer the altogether different question as to the permissible bases and content of Dr. Papa's expert opinion testimony.

A qualified expert witness may give testimony in the form of opinion if “(1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.” M.R.E. 702. With respect to the first requirement, “[i]f of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject, the facts or data need not be admissible in evidence in order for the opinion or inference to be admitted.” M.R.E. 703. However, such inadmissible facts or data “shall not be disclosed to the members by the proponent of the opinion or inferences unless the military judge determines that their probative value in assisting the members to evaluate the expert's opinion substantially outweighs their prejudicial effect.” *Id.*

Dr. Papa was qualified as an expert witness without defense objection based on his education and background, as well as his personal knowledge of laboratory procedures at the Brooks Lab. The question here is whether and to what extent Dr. Papa's testimony violated the Confrontation Clause and/or M.R.E. 703 by relaying testimonial hearsay. We first note certain well-established principles, with which we agree.

[10][11] First, it is well-settled that under both the Confrontation Clause and the rules of evidence, machine-generated data and printouts are not statements and thus not hearsay—machines are not declarants—and such data is therefore not “testimonial.”^{FN4} *United States v. Lamons*, 532 F.3d 1251, 1263 (11th Cir.2008); *Moon*, 512 F.3d at 362; *Washington*, 498 F.3d at 230–31; *United States v. Hamilton*, 413 F.3d 1138, 1142–43 (10th Cir.2005); *United States v. Khorozian*, 333 F.3d 498, 506 (3d Cir.2003); *see also* 4 Christopher B. Mueller & Laird C. Kirkpatrick, *Federal Evidence* § 380 (2d ed.1994) (“[N]othing ‘said’ by a machine ... is hearsay”). Machine-generated data and printouts such as those in this case are distinguishable from human statements, as they “involve so little intervention

by humans in their generation as to leave no doubt they are wholly machine-generated for all practical purposes.” *Lamons*, 532 F.3d at 1263 n. 23. Because machine-generated printouts of machine-generated data are not hearsay, expert witnesses may rely on them, subject only to the rules of evidence generally, and M.R.E. 702 and M.R.E. 703 in particular.

FN4. M.R.E. 801(a) defines a “statement” as either an “oral or written assertion” or “nonverbal conduct of a person, if it is intended by the person as an assertion.” (emphasis added). Furthermore, M.R.E. 801(b) defines “declarant” as “a person who makes a statement.” (emphasis added).

[12][13] Second, an expert witness may review and rely upon the work of others, including laboratory testing conducted by others, so long as they reach their own opinions in conformance with evidentiary rules regarding expert opinions. M.R.E. 702; M.R.E. 703; *see also Moon*, 512 F.3d at 362; *Washington*, 498 F.3d at 228–32. An expert *225 witness need not necessarily have personally performed a forensic test in order to review and interpret the results and data of that test. *See, e.g., Rector v. State*, 285 Ga. 714, 681 S.E.2d 157, 160 (2009) (holding that a toxicologist’s testimony was not barred by the Confrontation Clause because the toxicologist “had reviewed the work of the doctor who had originally prepared the report and reached the same conclusion that the victim’s blood sample tested negative for cocaine”); *Smith v. State*, 28 So.3d 838, 855 (Fla.2009) (holding that a laboratory supervisor who did not perform DNA tests could testify “because she ... formulated her own conclusions from the raw data produced by the biologists under her supervision”).^{FN5}

FN5. *Melendez–Diaz*, 129 S.Ct. at 2536–38, which explained at length the myriad ways a laboratory analyst’s report could be attacked on cross-examination and why the analyst whose testimonial hearsay was admitted must be subject to cross-examination, is not to the contrary. That case, which involved the admission of testimonial hearsay, did not hold that unadmitted forensic reports trigger the requirements of the Confrontation Clause.

[14][15] That an expert did not personally perform the tests upon which his opinion is based is explorable on cross-examination, but that goes to the weight, rather than to the admissibility, of that expert’s opinion. *See United States v. Raya*, 45 M.J. 251, 253 (C.A.A.F.1996) (holding that a social worker’s lack of personal interaction with or observation of a victim went to the weight, and not the admissibility of her testimony). Moreover, lack of knowledge or unwarranted reliance on the work of others may make an expert opinion inadmissible: the military judge, in his capacity as a “gatekeeper,” *see United States v. Sanchez*, 65 M.J. 145, 149 (C.A.A.F.2007) (citing *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 141, 119 S.Ct. 1167, 143 L.Ed.2d 238 (1999); *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 597, 113 S.Ct. 2786, 125 L.Ed.2d 469 (1993)), must determine whether the opinion is “based upon sufficient facts or data” and is the product of “reliable principles and methods” reliably applied to the case. *See M.R.E. 702.*^{FN6}

FN6. The fact that the Government may, consistent with the rules of evidence and the Confrontation Clause, introduce machine-generated data and expert testimony relying on the work of others does not preclude an accused from seeking to call as witnesses those who operated the machines or performed the work being relied upon to test, among other things, the accuracy, validity, and reliability of those machines and tests. As the Compulsory Process Clause of the Sixth Amendment, Article 46, Uniform Code of Military Justice (UCMJ), 10 U.S.C. § 846 (2006), and Rule for Courts–Martial (R.C.M.) 703(a) make clear, a defendant has the right to the compulsory process of witnesses who can provide relevant and necessary evidence in their defense. In other words, a live witness not required by the Confrontation Clause because the Government admitted no testimonial hearsay may nonetheless be called by the defense, and attendance compelled upon a showing of relevancy and necessity. *Id.*

[16][17] Third, and relatedly, neither the rules of evidence nor the Confrontation Clause permit an expert witness to act as a conduit for *repeating* testimonial hearsay. *Mejia*, 545 F.3d at 198. An expert witness may *review* and *rely upon* inadmissible hearsay in forming *independent conclusions*, but he may not circumvent either the rules of evidence, *see M.R.E. 703* (prohibiting the proponent from disclosing inadmissible facts and data relied upon by an expert witness unless the military judge determines “that their probative value in assisting the members to evaluate the expert’s opinion substantially outweighs their prejudicial effect”), or the Sixth Amendment by *repeating* the substance of the hearsay. *See Ayala*, 601 F.3d at 275 (“[T]he question when applying *Crawford* to expert

testimony is ‘whether the expert is, in essence, giving an independent judgment or merely acting as a transmitter for testimonial hearsay.’ ” (quoting *Johnson*, 587 F.3d at 635); *Law*, 528 F.3d at 912 (holding that the Confrontation Clause was not violated where the expert witness “did not relate statements by out-of-court declarants to the jury,” but based his conclusion on his experience as a narcotics investigator).

[18] Applying these principles to the instant case, many of the documents contained in the drug testing reports are machine-generated printouts of raw data and calibration*226 charts,^{FN7} and Dr. Papa's testimony consisted in large part of explaining and analyzing these documents. This portion of Dr. Papa's testimony was permissible because the documents relied upon were not hearsay of any kind, let alone testimonial hearsay.

FN7. By our count, machine printouts comprise 111 pages out of the 128 pages (approximately 87 percent) in the June drug testing report, and 19 pages out of the 32 pages (approximately 59 percent) in the July drug testing report.

Dr. Papa presented his ultimate conclusions as his own. When asked to give an opinion, Dr. Papa testified that based on his “training, education, and experience” it was his opinion that the tests of Appellant's samples were conducted reliably and that Appellant's urine showed traces of methamphetamine in the first test and marijuana in the second test.

Nonetheless, Dr. Papa's testimony repeated at least some testimonial hearsay of declarants who did not testify: the cover memoranda were not only admitted into evidence, but the substance of the testimonial hearsay contained therein was repeated almost verbatim by Dr. Papa himself when he testified that one of the summaries “tells you ... that we tested this particular specimen with our required menu of screen, rescreen, and GCMS confirmation” and “shows you what the results of the testing were.”

In short, although Dr. Papa may well have been able to proffer a proper expert opinion based on machine-generated data and calibration charts, his knowledge, education, and experience and his review of the drug testing reports alone, both the drug testing reports and Dr. Papa's testimony contained a mix of inadmissible and admissible evidence. Specifically, the cover memoranda were inadmissible under the Confrontation Clause, and Dr. Papa's testimony conveying the statements contained in those cover memoranda—including those concerning what tests were conducted, what substances were detected, and the nanogram levels of each substance detected—were inadmissible under both the Confrontation Clause and M.R.E. 703, while the machine-generated printouts and data were not hearsay at all and could properly be admitted into evidence and serve as the basis for Dr. Papa's expert conclusions.

IV.

The CCA viewed the drug testing reports *in toto*, and decided this case on the ground that the “drug testing results” were business records and not testimonial.^{FN8} *United States v. Blazier*, 68 M.J. 544, 545–46 (A.F.Ct.Crim.App.2008). Finding no error, the CCA did not have cause to examine the effect of error on the case.

FN8. As noted in *Melendez–Diaz*, statements prepared in anticipation of litigation (as at least the cover memoranda clearly were), are not business records and, even if a document might otherwise be a business record, if it is testimonial hearsay, its admission violates the Confrontation Clause. 129 S.Ct. at 2538–40.

[19][20] As noted *supra*, the testimonial cover memoranda were admitted in violation of the Confrontation Clause. See *Blazier I*, 68 M.J. at 443. In light of this admission and Dr. Papa's repetition of the cover memoranda in his testimony, it is appropriate to consider harmlessness in light of a constitutional error.

“For most constitutional errors at trial, we apply the harmless error test set forth in *Chapman v. California*, 386 U.S. 18, 87 S.Ct. 824, 17 L.Ed.2d 705 (1967), to determine whether the error is harmless beyond a reasonable doubt.” *United States v. Upham*, 66 M.J. 83, 86 (C.A.A.F.2008). Evidence admitted in violation of ... the Confrontation Clause of the Sixth Amendment is subject to that standard.

United States v. Gardinier, 67 M.J. 304, 306 (C.A.A.F.2009). Dr. Papa could have arrived at an expert opinion

based on training, education, experience, and admissible evidence alone, and considered, but not repeated, inadmissible evidence in arriving at an independent expert opinion. Such expert opinion and admissible evidence together could have been legally sufficient to establish the presence of drug metabolite in the urine tested. See *United States v. Barrow*, 45 M.J. 478, 479 (C.A.A.F.1997). But in assessing harmlessness in the constitutional context, the *227 question is not whether the evidence is legally sufficient to uphold a conviction without the erroneously admitted evidence. See *Fahy v. Connecticut*, 375 U.S. 85, 86, 84 S.Ct. 229, 11 L.Ed.2d 171 (1963). Rather, “[t]he question is whether there is a reasonable possibility that the evidence complained of might have contributed to the conviction.” *Chapman*, 386 U.S. at 23, 87 S.Ct. 824 (quoting *Fahy*, 375 U.S. at 86–87, 84 S.Ct. 229). This determination is made on the basis of the entire record, and its resolution will vary depending on the facts and particulars of the individual case.

In this case the parties have confined their harmless error arguments to the specified harmless error issue—the effect of Dr. Papa's testimony. The parties have not addressed whether or not the constitutional error was harmless in light of the entire record. Having answered the specified issues, we remand this case for the parties to brief, and the CCA to resolve in the first instance—on the basis of the entire record—whether the admission of the drug testing report cover memoranda and Dr. Papa's repetition of the contents of such memoranda were harmless beyond a reasonable doubt.^{FN9}

FN9. Consistent with the principles articulated in *Melendez–Diaz*, *Crawford*, *United States v. Magyari*, 63 M.J. 123 (C.A.A.F.2006), *United States v. Harcrow*, 66 M.J. 154 (C.A.A.F.2008), *Blazier I*, and this case, the CCA may determine whether any other documents within the drug testing reports for the June and July tests (such as certifications that all procedures were properly followed on the specimen custody documents) were testimonial or utilized in violation of M.R.E. 703 if necessary to its decision.

Accordingly, the decision below is reversed. The record is returned to the Judge Advocate General of the Air Force for remand to the Court of Criminal Appeals.

United States Court of Appeals,
Seventh Circuit.
UNITED STATES of America, Plaintiff-Appellee,
v.
George MOON and Anthony Alexander, Defendants-Appellants.

Nos. 05-4506, 06-1840.
Argued Sept. 13, 2007.
Decided Jan. 3, 2008.

EASTERBROOK, Chief Judge.

Anthony Alexander and George Moon have been convicted of distributing cocaine and of some ancillary crimes. See 21 U.S.C. § 841. Alexander received a sentence of life imprisonment and Moon of 190 months. The principal question on appeal is whether a chemist violated the Confrontation Clause of the Sixth Amendment when testifying that the substance seized from defendants was cocaine.

James DeFrancesco, a chemist employed by the Drug Enforcement Agency, *361 testified that the substance was cocaine. He based this conclusion on the output of two machines: an infrared spectrometer and a gas chromatograph. DeFrancesco did not perform the tests himself; the lab work had been done by Ragnar Olson, a chemist who left federal employment three weeks before trial. Olson had just started at law school and did not want to interrupt his legal education. So DeFrancesco testified, using the instruments' output, a report that Olson had prepared, and Olson's lab notes (which persuaded DeFrancesco that Olson had prepared the samples and run the tests correctly). Defendants did not object to DeFrancesco's testimony, or the introduction into evidence of Olson's report, other than on the ground that the tested samples' chain of custody was faulty. On appeal, however, they abandon the chain-of-custody point and contend that using Olson's work in any way violates the Confrontation Clause. The lack of an objection means that appellate review is limited to plain error.

Crawford v. Washington, 541 U.S. 36, 124 S.Ct. 1354, 158 L.Ed.2d 177 (2004), holds that the Confrontation Clause entitles defendants in criminal cases to block the use of testimonial statements by persons who are not available for cross-examination at trial. Phrasing *Crawford's* rule as an entitlement, rather than an unconditional command to the court, is important. Hearsay usually is weaker than live testimony, and defendants may prefer the hearsay version rather than making an objection that would compel the prosecution to produce a stronger witness. If a confrontation-clause objection had been made and granted in this case, for example, the result would have been the appearance of Olson on the stand, and then defendants would have been worse off than they were with DeFrancesco—for defense counsel could undermine DeFrancesco's testimony by reminding the jury that he had not done any of the work and that flaws in Olson's procedures may have been omitted from the lab notes. That it may be to defendants' advantage to accept the hearsay version of evidence makes it problematic to entertain a *Crawford* claim via the plain-error clause of Fed.R.Evid. 103(d). A defendant who sincerely wants live testimony should make the demand, so that the declarant can be produced. The lack of a demand for testimony by an available declarant leads to the conclusion that the appellate argument is strategic rather than sincere.

[1] We need not pursue that subject, however, because there was no problem with DeFrancesco's testimony. He testified as an expert, not as a fact witness. When an expert testifies, “the facts or data need not be admissible in evidence in order for the opinion or inference to be admitted.” Fed.R.Evid. 703. So if the Confrontation Clause precludes admitting Olson's report, this does not spoil DeFrancesco's testimony. See *United States v. Henry*, 472 F.3d 910, 914 (D.C.Cir.2007). (Litigants may insist that the data underlying an expert's testimony be admitted, see Fed.R.Evid. 705, but by offering the evidence themselves defendants would waive any objection under the Confrontation Clause.)

[2][3] Because defendants failed to make the right objection, Olson's report was received in evidence. And some of his report is indeed testimonial in nature. The report has two kinds of information: the readings taken from the instruments, and Olson's conclusion that these readings mean that the tested substance was cocaine. The latter is

testimonial as the Supreme Court used that word in *Crawford* and more recent decisions, such as *Davis v. Washington*, 547 U.S. 813, 126 S.Ct. 2266, 165 L.Ed.2d 224 (2006). *Davis* *362 says that a statement is testimonial if it was made without an ongoing emergency, and “the primary purpose of the interrogation [or statement] is to establish or prove past events potentially relevant to later criminal prosecution.” 126 S.Ct. at 2274 (footnote omitted). A chemist's assertion that “this substance was cocaine” meets the *Davis* definition.

[4] DeFrancesco reached on the stand the same conclusion that appeared in Olson's report. Defendants do not say that Olson's evaluation could have played any role in the jury's deliberation. Instead they are concerned about the readings taken from the instruments, because those readings are the problem for the defense. Any competent chemist would infer from these data that the tested substance was cocaine. Yet the instruments' readouts are not “statements”, so it does not matter whether they are “testimonial.” That's the holding of *United States v. Washington*, 498 F.3d 225 (4th Cir.2007).

A physician may order a blood test for a patient and infer from the levels of sugar and insulin that the patient has diabetes. The physician's diagnosis is testimonial, but the lab's raw results are not, because data are not “statements” in any useful sense. Nor is a machine a “witness against” anyone. If the readings are “statements” by a “witness against” the defendants, then the machine must be the declarant. Yet how could one cross-examine a gas chromatograph? Producing spectrographs, ovens, and centrifuges in court would serve no one's interests. That is one reason why Rule 703 provides that the expert's source materials need not be introduced or even admissible in evidence. The vital questions-was the lab work done properly? what do the readings mean?-can be put to the expert on the stand. The background data need not be presented to the jury.

Thus we agree with *Washington* that the Sixth Amendment does not demand that a chemist or other testifying expert have done the lab work himself. Our decision in *United States v. Ellis*, 460 F.3d 920 (7th Cir.2006), is to much the same effect-though it does not involve expert analysis. A hospital conducted blood and urine tests that were introduced into evidence as the hospital's business records. See Fed.R.Evid. 803(6); see also Rule 803(4). Then the arresting officer testified that the results demonstrated the presence of methamphetamine in Ellis's system. *Ellis* holds that the test results were not “testimonial” under *Crawford* and *Davis*. 460 F.3d at 923-24. We did not consider the possibility that the data are not “statements” in the first place. Thus *Washington* and *Ellis* reach the same result: the Confrontation Clause does not forbid the use of raw data produced by scientific instruments, though the interpretation of those data may be testimonial.

[5] DeFrancesco was entitled to analyze the data that Olson had obtained. Olson's own conclusions based on the data should have been kept out of evidence (as doubtless they would have been, had defendants objected). Still, given DeFrancesco's live testimony and availability for cross-examination, Olson's inferences and conclusions were not harmful to the defendants.

*** REMAINDER OF OPINION OMITTED ***

Supreme Court of New Hampshire.
The STATE of New Hampshire
v.
Anthony DILBOY.

No. 2008–287.
Argued: Jan. 20, 2010.
Opinion Issued: April 20, 2010.
As Modified on Denial of Reconsideration June 3, 2010.

DUGGAN, J.

*139 The defendant, Anthony Dilboy, was convicted of two counts of manslaughter, *see* RSA 630:2 (2007), and two alternative counts of negligent homicide, *see* RSA 630:3 (Supp. 2005) (amended 2006), following a jury trial. On appeal, he argues that the Trial Court (*Fauver, J.; Houran, J.*) erroneously: (1) admitted toxicology evidence under New Hampshire Rules of Evidence 401, 402, 403, and 404(b); (2) denied his motion to suppress urine test results; (3) admitted evidence of lab test results in violation of the Federal Confrontation Clause; (4) instructed the jury that evidence of voluntary intoxication could satisfy the mental state element of reckless; (5) used a special verdict form, and (6) denied his motion to dismiss the class A felony negligent homicide charges. We affirm.

*140 The record reveals the following. At approximately 1:45 p.m. on March 7, 2006, the defendant arrived at a friend's home to borrow her pick-up truck. The defendant then left just before 2:00 p.m. He later told the police he was on his way to Portsmouth to buy heroin.

At approximately 2:10 p.m., the defendant drove through a red light at a high rate of speed at the intersection of Indian Brook Drive and the Spaulding Turnpike in Dover. Mark Vachon, driving a Volvo sedan, was turning left at the intersection. Without slowing down, the defendant collided with the passenger-side of the Volvo, killing Vachon and his passenger, Alexander Bean.

Members of the Dover Police and Fire Departments arrived on the scene within minutes. They found the defendant standing beside the truck. He told the paramedics several times that he was addicted to heroin and suffering from withdrawal. He stated that he had taken three Klonopin tablets at 9:00 that morning, explaining that although he did not have a prescription for it, he was taking it to help with symptoms of heroin withdrawal. He denied using heroin that day. The paramedics started an IV, took a blood sample, and transported him to Wentworth Douglas Hospital.

Several officers from the Dover Police Department went to the hospital to interview the defendant, including Detective Brad Gould and Officers Daniel Gebers and David Martinelli. Gould arrived just before 3:00 p.m. and began interviewing the defendant. He told Gould that he was on his way to Portsmouth at the time of the accident, and had left at 10:00 a.m.

The defendant also told Gould that he was addicted to heroin but had not used it **1097 since March 5, approximately forty-eight hours before the collision, when he had “snorted a couple of bags.” He said he used heroin approximately two or three times a week and substituted other drugs, such as Klonopin and methadone, when he could not get heroin. He explained that he had swallowed one Klonopin pill at approximately 9:00 the morning of the collision, and “crushed and snorted” the other two.

Gould testified that the defendant's “speech was sluggish” and “his movements appeared slow.” The defendant fell asleep several times while he was at the hospital. At approximately 3:30 p.m., Gould asked the defendant if he knew what time it was, and he responded that it was about noon or 1:00 p.m.

Shortly after Gould began interviewing the defendant, Officer Martinelli arrived. The officers conferred, and decided to arrest the defendant. Gould told him that he was under arrest, while Martinelli read him his administrative

license suspension (ALS) rights. Gould then read the defendant his *Miranda* rights. *See Miranda v. Arizona*, 384 U.S. 436, 86 S.Ct. 1602, 16 L.Ed.2d 694 (1966).

Four additional blood samples and a urine sample were then taken from the defendant at the hospital. The first blood sample was collected at *141 approximately 4:45 p.m. Some time between 4:45 and 5:00, after the defendant had invoked his right to counsel and while Gould was present in the room, a hospital employee asked the defendant for a urine sample, which he supplied. The police then obtained a search warrant for the defendant's clothing, hair, and three additional blood samples, which were drawn one hour apart, beginning at 6:33 p.m. Officer Gebers took custody of the four blood samples, as well as the blood sample the paramedics earlier collected. He also took custody of the urine sample collected by the hospital, and took all of the samples to the police station.

At approximately 8:00 p.m., after the hospital finished treating the defendant, Martinelli administered field sobriety tests, while Gebers recorded the results. During the second part of the one-leg stand, Martinelli noticed that the defendant swayed slightly and saw muscle tremors in his legs. The officers then waited for the hospital to discharge the defendant, during which time he fell asleep again. Gebers testified that the defendant was cold and appeared to have a dry mouth.

The five blood samples and urine sample were tested at the State Police Forensics Toxicology Laboratory under the supervision of Dr. Michael Wagner, the assistant laboratory director. Dr. Wagner testified that the laboratory testing found a trace amount of Klonopin, trace amounts of cocaine, and a quantifiable amount of a metabolite of cocaine in one sample of the defendant's blood, and cocaine, a metabolite of cocaine, morphine, and Oxycodone in the defendant's urine. Dr. Wagner explained that "trace" amounts of drugs meant that the lab reliably detected drugs in the samples but in an amount insufficient to quantify. Dr. Wagner testified that the detection of a trace amount of Klonopin in the defendant's blood sample was consistent with his having ingested three pills between 9:00 and 9:20 a.m. on the day of the accident. He also stated that the presence of morphine, a metabolite of heroin, in the defendant's urine was consistent with his having used heroin up to two days prior to the accident.

Dr. Wagner also described the physical and cognitive effects of these substances. He stated that Klonopin is a central nervous system depressant that can affect a person for up to six hours, or longer if the person snorts it. He stated that Klonopin can make a person feel "more tired, lethargic"***1098 and be "less aware of [his] surroundings," and can slow a person's reaction time. It can also impair coordination, cognitive thinking, and vigilance, and cause dizziness and blurred vision. He further testified that symptoms of heroin withdrawal may begin within three to four hours after the last use. Within eight to twelve hours withdrawal may cause increased irritability and physiological changes in the body, including dry mouth, teary eyes, runny nose, tremors, muscle cramps, chills, goose bumps, and leg cramps. He explained that a user will experience peak withdrawal symptoms within *142 one to three days after using heroin, after which the symptoms decrease until up to ten days. Withdrawal may impair a user's "decision-making process" and reaction time. It may also produce "risk taking behavior." He opined that a person who ingests heroin two to three times a week, and who substitutes other drugs when unable to get heroin, shows "an addictive profile."

Before trial, the defendant filed several motions to suppress evidence. The defendant was found guilty on all four charges. The trial court sentenced him on the two manslaughter charges. This appeal followed.

I. Toxicology Evidence

*** SECTION OF OPINION OMITTED ***

II. Illegal Seizure of Urine Sample

*** SECTION OF OPINION OMITTED ***

**1101 *146 *III. Confrontation Clause*

[12] We next address the defendant's argument that the admission of Dr. Wagner's testimony about the test results for his blood and urine samples violated the Federal Confrontation Clause. The defendant argues that the test

results are testimonial under the recent United States Supreme Court case of *Melendez–Diaz v. Massachusetts*, — U.S. —, 129 S.Ct. 2527, 174 L.Ed.2d 314 (2009), and contends that they were inadmissible absent the testimony of the analyst who performed the tests. The State counters that *Melendez–Diaz* applies only to “formalized testimonial materials, such as affidavits, depositions, prior testimony, or confessions.” *Melendez–Diaz*, 129 S.Ct. at 2543 (Thomas, J., concurring). Because the defendant relies solely upon the Federal Constitution, we limit our review to his claims under the Federal Confrontation Clause. *State v. O’Maley*, 156 N.H. 125, 131, 932 A.2d 1 (2007), *cert. denied*, — U.S. —, 129 S.Ct. 2856, 174 L.Ed.2d 600 (2009).

Before trial, the defendant moved to “preclude the State’s experts from testifying to: (1) transmittal slips; (2) report of laboratory examination; (3) blood and urine sample collection forms; (4) blood test results; (5) EMT reports” and “evidence collection forms,” arguing that the admission of such testimony would violate his right to confrontation. The trial court, relying upon *O’Maley*, permitted Dr. Wagner’s testimony about the blood test results, concluding that “the transmittal slips, the blood sample collection forms, and the blood test results are non-testimonial.” The court reasoned that “the blood test results ... are [not] accusations.”

Dr. Wagner testified that the laboratory conducts tests and analyzes “evidence at the request of law enforcement,” and that he, along with the other laboratory employees, are “civilian representatives of the state police.” Dr. Wagner explained that, primarily, he manages lab employees, “oversee[s] the development of [the] laboratories,” and reviews and testifies about lab results. Although he does not test samples, Dr. Wagner is a “certifying scientist or senior toxicologist,” and reviews the data, paperwork, comments, and “any issue that’s involved in” sample analyses.

Dr. Wagner explained how the laboratory receives, processes, and tests samples, and what kinds of samples it tests. The laboratory performs two tests on samples: a screening test to look for families of drugs, and then a more specific test to determine “the particular drugs that are present” based on any positive results from the first test. The laboratory usually produces “a drug screen report and ... a drug confirmation report” for a particular sample. Then, the laboratory issues a “results letter” about the sample at issue. It is unclear from the record who authored the results letters for the defendant’s samples,**1102 or who performed the tests on the samples.

*147 Dr. Wagner testified that he reviewed the test results for the defendant’s samples. He testified that the laboratory found trace amounts of Klonopin, cocaine, and a metabolite of cocaine in the defendant’s blood, and cocaine, a metabolite of cocaine, morphine, and Oxycodone in the defendant’s urine. He discussed these substances and the likely effects of the drugs taken by the defendant on his body and mind depending on the mode of ingestion, and how long the drugs could remain in his body. Based upon the test results, Dr. Wagner opined as to when the defendant took the drugs at issue. Dr. Wagner also testified about the signs and symptoms of heroin withdrawal, its cognitive and physical effects, and the impact of the combination of the drugs the defendant took and heroin withdrawal on the defendant.

[13] The Sixth Amendment “provides that in all criminal prosecutions, the accused shall enjoy the right to be ... confronted with the witnesses against him.” *Melendez–Diaz*, 129 S.Ct. at 2531. In *Crawford v. Washington*, 541 U.S. 36, 51, 124 S.Ct. 1354, 158 L.Ed.2d 177 (2004), the United States Supreme Court held that “[a] witness’s testimony against a defendant is ... inadmissible unless the witness appears at trial or, if the witness is unavailable, the defendant had a prior opportunity for cross-examination.” *Melendez–Diaz*, 129 S.Ct. at 2531. “The crucial determination under *Crawford* as to whether an out-of-court statement violates the Confrontation Clause is whether it is ‘testimonial’ or not.” *O’Maley*, 156 N.H. at 131, 932 A.2d 1. “Testimony, in turn, is typically a solemn declaration or affirmation made for the purpose of establishing or proving some fact.” *Crawford*, 541 U.S. at 51, 124 S.Ct. 1354 (quotation omitted). Whether a statement is testimonial is a question we review *de novo*. *O’Maley*, 156 N.H. at 138, 932 A.2d 1.

In *Crawford*, the Court described the following as categories of testimonial statements:

ex parte in-court testimony or its functional equivalent—that is, material such as affidavits, custodial examinations, prior testimony that the defendant was unable to cross-examine, or similar pretrial statements that declarants would reasonably expect to be used prosecutorially; extrajudicial statements contained in formalized

testimonial materials, such as affidavits, depositions, prior testimony, or confessions; statements that were made under circumstances which would lead an objective witness reasonably to believe that the statement would be available for use at a later trial.

Id. at 51–52, 124 S.Ct. 1354 (quotation, citations and ellipsis omitted).

*148 *Melendez–Diaz* considered the admissibility of “three certificates of analysis showing the results of the forensic analysis performed on ... seized substances” that identified the substances as cocaine. *Melendez–Diaz*, 129 S.Ct. at 2531 (quotation omitted). The certificates also described the weight of the bags containing the substances. *Id.* Analysts at the State Laboratory Institute of the Massachusetts Department of Public Health swore to the certificates before a notary public “as required under Massachusetts law.” *Id.* The analysts did not testify at trial. *See id.*

The Court held that the certificates were testimonial because they were “quite plainly affidavits: declaration[s] of facts written down and sworn to by the declarant before an officer authorized to administer oaths.” *Id.* at 2532 (quotation omitted). The certificates were “incontrovertibly a solemn declaration or affirmation made for the purpose of establishing or proving some fact,” and were “functionally**1103 identical to live, in-court testimony, doing precisely what a witness does on direct examination.” *Id.* (quotation omitted). The Court reasoned that the affidavits were “made under circumstances which would lead an objective witness reasonably to believe that the statement would be available for use at a later trial,” and noted that under Massachusetts law the “sole purpose of the affidavits was to provide prima facie evidence of the composition, quality, and the net weight of the analyzed substance.” *Id.* (quotation omitted).

The Court explicitly stated that it did “not hold, and it is not the case, that anyone whose testimony may be relevant in establishing the chain of custody, authenticity of the sample, or accuracy of the testing device, must appear in person as part of the prosecution’s case.” *Id.* at 2532 n. 1. Although the prosecution has the obligation “to establish the chain of custody ... this does not mean that everyone who laid hands on the evidence must be called.” *Id.* (quotation and citation omitted). “[G]aps in the chain of custody normally go to the weight of the evidence rather than its admissibility.” *Id.* (quotation and brackets omitted).

It is up to the prosecution to decide what steps in the chain of custody are so crucial as to require evidence; but what testimony *is* introduced must (if the defendant objects) be introduced live. Additionally, documents prepared in the regular course of equipment maintenance may well qualify as nontestimonial records.

Id.

Justice Thomas, the only member of the majority to write a concurring opinion, wrote separately to note his continuing adherence to his “position that the Confrontation Clause is implicated by extrajudicial statements only insofar as they are contained in formalized testimonial materials, such as affidavits, depositions, prior testimony, or confessions.” *Id.* at 2543 *149 (Thomas, J., concurring) (quotation omitted). He joined the majority opinion “because the documents at issue in this case are quite plainly affidavits,” which “fall within the core class of testimonial statements governed by the Confrontation Clause.” *Id.* (Thomas, J., concurring) (quotation omitted).

Although acknowledging that *Melendez–Diaz* “addressed a narrow category of testimonial statements”—“ex parte out-of-court affidavits of laboratory analysts regarding the drug tests”—the defendant argues that its reasoning applies to the admission of the test results through Dr. Wagner’s testimony, because it “applies whenever a forensic test result is admitted without the testimony of the analyst.” The State argues that *Melendez–Diaz* did not determine whether expert testimony like Dr. Wagner’s is prohibited by *Crawford* and relies upon decisions from other courts upholding expert testimony similar to the testimony in this case. *See Larkin v. Yates*, No. CV 09–2034–DSF (CT), 2009 WL 2049991, at *1–2 (C.D.Cal. July 9, 2009).

In the wake of *Melendez–Diaz*, courts have considered the admissibility of expert testimony based upon testimonial statements, and have concluded that such testimony is inadmissible if the “witness is used as little more than a conduit or transmitter for testimonial hearsay, rather than as a true expert whose considered opinion sheds light on some specialized factual situation.” *United States v. Johnson*, 587 F.3d 625, 635 (4th Cir.2009), *cert. denied*

— U.S. —, 130 S.Ct. 2128, 176 L.Ed.2d 749 (2010); *United States v. Alexander*, Nos. 2:04-cr-71, 2:09-cv-294, 2010 WL 404072, at *4 (N.D.Ind. January 25, 2010). “Allowing a witness simply to parrot out of court testimonial statements ... ****1104** directly to the jury in the guise of expert opinion would provide an end run around *Crawford*.” *Johnson*, 587 F.3d at 635 (quotation omitted).

Some courts have concluded that an expert witness may not “recite or otherwise testify about the underlying factual findings of [an] unavailable medical examiner ... contained in [an] autopsy report.” *Com. v. Avila*, 454 Mass. 744, 912 N.E.2d 1014, 1029 (2009) (expert witness's testimony must be confined to own opinions); see *Wood v. State*, 299 S.W.3d 200, 213 (Tex.App.2009) (expert's testimony disclosing statements in autopsy report upon which his opinion was based violated Confrontation Clause), *petition for discretionary review filed* (2010). However, other courts have concluded that an expert may rely upon testimonial statements when the expert renders “an independent judgment” and applies his or her “training and experience to the sources before [the expert]” because the opinion is “an original product that can be tested through cross-examination.” *Johnson*, 587 F.3d at 635; see, e.g., *State v. Hough*, — N.C.App. —, —, — — —, 690 S.E.2d 285 (2010) ***150** (expert testimony reviewing laboratory tests, reviewing and confirming accuracy of tests performed by other analyst and identifying substances as marijuana and cocaine permissible even though based upon lab tests performed by non-testifying analyst); *United States v. Turner*, 591 F.3d 928, 932–34 (7th Cir.2010) (expert testimony identifying substances, discussing testing procedures and safeguards, and peer reviewing the testing analyst's work admissible under *Melendez-Diaz*). Thus, although the test results relied upon by the testifying expert may be testimonial, expert testimony based upon those results may still be admissible. See *Johnson*, 587 F.3d at 635. Whether such testimony is admissible must be determined on a case-by-case basis. See *Davis v. Washington*, 547 U.S. 813, 827–30, 126 S.Ct. 2266, 165 L.Ed.2d 224 (2006).

We agree with the latter approach. Here, although we assume that the test results were testimonial, Dr. Wagner's testimony did not violate the Federal Confrontation Clause. Dr. Wagner explained the procedures used and testing done by the lab, and that he reviews the data, paperwork, comments, and any other issues that arise with samples. Specifically, with respect to the defendant's samples, Dr. Wagner testified that he reviewed the test results, and explained that the laboratory had found trace amounts of Klonopin, cocaine, and a metabolite of cocaine in the defendant's blood, and cocaine, a metabolite of cocaine, morphine, and Oxycodone in the defendant's urine. Based upon the defendant's statements and the lab results, Dr. Wagner rendered his opinion as to the effects of the drugs taken by the defendant on his mind and body and as to when the defendant took the drugs. Finally, Dr. Wagner testified about the signs and symptoms of heroin withdrawal, its cognitive and physical effects, and the likely effects of the combination of the drugs taken by the defendant and heroin withdrawal on the defendant. Instead of “parrot [ing] out of court testimonial statements,” *Johnson*, 587 F.3d at 635, Dr. Wagner generated opinions based upon his review of the test results, and the defendant had the opportunity to cross-examine him regarding his opinions as well as the laboratory procedures and test results. Accordingly, his testimony did not violate the Federal Confrontation Clause. See *Turner*, 591 F.3d at 932–34; *Johnson*, 587 F.3d at 635; *Hough*, — N.C.App. at —, 690 S.E.2d 285.

Moreover, *Melendez-Diaz* simply did not determine whether the technician or analyst who performed the scientific tests at issue must testify at trial. See *Yates*, ****1105** 2009 WL 2049991, at *2 (although *Crawford* clearly established that the admission of affidavits is erroneous “the same cannot be said regarding a supervising expert's testimony about test results prepared by someone other than the testifying expert”); *Carolina v. State*, 302 Ga.App. 40, 41–42, 690 S.E.2d 435 (2010). ***151** Justice Thomas' concurring opinion, in which he reaffirmed his belief that “the Confrontation Clause is implicated by extrajudicial statements only insofar as they are contained in formalized testimonial materials, such as affidavits, depositions, prior testimony, or confessions,” underscores the limited reach of *Melendez-Diaz*. *Melendez-Diaz*, 129 S.Ct. at 2543 (quotation omitted). Unlike the certificates at issue in *Melendez-Diaz*, Dr. Wagner was available for confrontation and cross-examination. See *Alexander*, 2010 WL 404072, at *4.

***** REMAINDER OF OPINION OMITTED *****

United States Court of Appeals,
Second Circuit.
UNITED STATES of America, Appellee,
v.
Leonel MEJIA, a/k/a Little Chino, Defendant,
David Vasquez, a/k/a Gigante, and Ledwin Castro, a/k/a Hueso, Defendants–Appellants.

Docket Nos. 05–2856–cr, 05–6683–cr(CON), 06–1744–cr(CON).

Argued: Aug. 30, 2007.

Decided: Oct. 6, 2008.

HALL, Circuit Judge:

Appeal from judgment of conviction entered in the United States District Court for the Eastern District of New York (Wexler, *J.*) for conspiracy to commit assaults with a dangerous weapon in aid of racketeering activity, 18 U.S.C. § 1959(a)(6), three counts of assault with a dangerous weapon in aid of racketeering activity, *id.* § 1959(a)(3), and three counts of discharge of a firearm during a crime of violence, *id.* § 924(c)(1). We vacate the judgment after finding that the admission of expert witness Hector Alicea's testimony violated the Federal Rules of Evidence and the Sixth Amendment Confrontation Clause, and that the error was not harmless. We remand for retrial.

BACKGROUND

I. The Drive–By Shootings

On June 18, 2003, Ledwin Castro and David Vasquez (collectively, “Appellants”), along with several others, participated in two drive-by shootings on Long Island, New York. At the time, Appellants were members of the MS–13 gang.^{FN1} MS–13 is a nationwide criminal gang organized into local subunits known as “cliques.” At the time, to become a full member of MS–13, an individual was required to “make his quota,” which meant to engage in acts of violence against members of rival gangs, such as the SWP and the Bloods. MS–13 had local cliques on Long Island, and Castro was the leader of the Freeport clique (the “Freeport Locos Salvatruchas,” or “FLS”).

FN1. MS–13 has also appeared in cases in the Fourth, Fifth, Sixth, and Eleventh Circuits. *See United States v. Calles*, 250 Fed.Appx. 939 (11th Cir.2007); *United States v. Funes*, 248 Fed.Appx. 593 (5th Cir.2007); *United States v. Hernandez–Villanueva*, 473 F.3d 118 (4th Cir.2006); *Castellano–Chacon v. INS*, 341 F.3d 533 (6th Cir.2003).

On the day of the shootings, Vasquez, Castro, Ralph Admettre (a member of MS–13), and Nieves Argueta, a new initiate into MS–13, met at the apartment of Bonerje Menjivar (also a member of MS–13). There, the group discussed their plan to shoot members of rival gangs. They had been preparing to carry out the shootings for quite some time. A few weeks earlier, Admettre, acting at Castro's direction, had stolen the van that they would use. Earlier that day, Vasquez had informed Admettre that he—Vasquez—had procured a handgun belonging to the Freeport clique. While the group was at Menjivar's apartment, Menjivar gave Castro ammunition for the handgun.

Admettre, Castro, Vasquez, and Argueta put the plan into action that night. At about 9:40 p.m., Admettre drove the others to a laundromat in Hempstead, New York. After Vasquez and Castro reconnoitered the scene, attempting to determine whether anyone in the parking lot was a member of SWP, a rival gang, Admettre left the laundromat parking lot and stationed the van in a gas station parking lot across the street. Once the van was in position, Vasquez fired at the crowd in the laundromat parking lot from inside the van. Two individuals were hit. Ricardo Ramirez, age fifteen, was hit by three shots in the chest, arm, and leg. Douglas Sorto, age sixteen, was hit once in the leg. Both victims survived the shooting. After Vasquez fired these shots, Admettre drove away. Castro then called Menjivar and informed him that more ammunition would be needed. Admettre drove everyone back to Menjivar's apartment, and Menjivar gave Vasquez additional ammunition.

*184 Shortly thereafter, at approximately 10:20 p.m., Admettre, Castro, Vasquez, and Argueta traveled to a

delicatessen parking lot in Freeport, New York. Upon arriving, they saw a group of young black men who they believed were members of the Bloods, a rival gang. Vasquez handed the handgun to Argueta, who proceeded to shoot one of the young men, Carlton Alexander, seven times in the back. Despite being hit by multiple shots, Alexander survived. After the shooting, the four men immediately abandoned the van. About one month later, local law enforcement arrested Castro, Vasquez, Admetre, and Argueta.

II. Indictment and Trial

In February 2004, a federal grand jury indicted Vasquez, Castro, and twelve others for various offenses stemming from a series of violent incidents on Long Island between August 2000 and September 13, 2003. A superseding indictment (“the Indictment”) was returned on June 23, 2005. The Indictment described MS–13, or “La Mara Salvatrucha,” as a gang that originated in El Salvador but had members throughout the United States. It accused all of the defendants of being members of MS–13, and it alleged that MS–13 members “engaged in criminal activity” in order to increase their position within the organization. According to the Indictment, MS–13 constituted an “enterprise” under 18 U.S.C. § 1959(b)(2) because it was an ongoing organization the activities of which affected interstate commerce. The Indictment furthermore stated that MS–13 engaged in two forms of racketeering activity under 18 U.S.C. § 1961(1): (1) acts and threats involving murder as defined by New York State law, and (2) narcotics trafficking as defined by federal law.

The Indictment charged both Appellants with ten counts. Count One charged them with conspiracy to commit assaults with a dangerous weapon in order to maintain and increase their position within the MS–13 racketeering enterprise, in violation of 18 U.S.C. § 1959(a)(6). Counts Six, Seven, and Eight charged Appellants with assaulting Ramirez, Sorto, and Alexander, respectively, with a dangerous weapon in order to maintain or increase their positions in the MS–13 racketeering enterprise, in violation of 18 U.S.C. § 1959(a)(3). Counts Twelve, Thirteen, and Fourteen accused Appellants of discharging a firearm during a crime of violence, in violation of 18 U.S.C. § 924(c)(1)(A)(iii). The Indictment identified the relevant crimes of violence as the assaults charged in Counts Six, Seven, and Eight. Finally, Counts Seventeen, Eighteen, and Nineteen charged Appellants with using an explosive to commit a felony—the felonies being the assaults charged in Counts Six, Seven, and Eight—in violation of 18 U.S.C. § 844(h)(1).^{FN2}

FN2. The Government's theory was that the ammunition that was used to commit the drive-by shootings constituted an “explosive” under federal law.

The district court severed the charges against Appellants from the charges against some of their co-defendants. Appellants' remaining co-defendants pleaded guilty to assault, and Admetre pleaded guilty to the conspiracy charge and to using a firearm during a crime of violence. Appellants proceeded to trial before the district court. During the course of the trial, which took place between July 19 and July 26, 2005, the Government called Hector Alicea, an officer with the New York State Police, as an expert witness. The Government also called the three shooting victims and co-defendants Admetre and Menjivar. In addition, the Government *185 introduced into evidence telephone records, the firearm used in the shootings, ballistics records, and Appellants' post-arrest confessions.

Admetre testified to his membership in MS–13 and about the gang's structure and operations. He stated that MS–13 was in “an all out war with rival gangs”—a war that included shootings, stabbings, fighting, and murder—and that MS–13 had a policy to murder the members of rival gangs. Admetre went on to identify Appellants as members of MS–13. He also described an uncharged shooting involving both Appellants that took place in February 2003:

David Vasquez identified [an] SWP member and opened fire. And Castro jumped out along with Vasquez to chase the SWP member down the block and both of them fired.

Later, Menjivar also testified about his membership in MS–13 and about the gang's structure and operations. Menjivar further testified that the Freeport clique sent money to El Salvador to help members who had been deported from the United States. Alicea testified about MS–13's history and structure, and he also explained MS–13's activities on Long Island. Because the nature of Alicea's testimony is an important and disputed issue on appeal, the subjects about which he testified are discussed further in our analysis of Appellants' challenge to the admission

of his testimony.

III. The Jury Verdict and Sentencing

On July 26, 2005, the jury found Appellants guilty on all ten counts. In a special verdict, the jury further found that MS-13 was an enterprise that affected interstate commerce; that MS-13 engaged in acts and threats of murder; that Appellants were members of the MS-13 enterprise; and that Appellants had participated in the conspiracy to assault and in the charged assaults in order to maintain or increase their positions within MS-13. The jury failed to find, however, that MS-13 engaged in the racketeering activity of narcotics trafficking.

One week later, Appellants asked the district court to set aside the verdict and enter a judgment of not guilty pursuant to Federal Rule of Criminal Procedure 29, or in the alternative to vacate the judgment and order a new trial pursuant to Federal Rule of Criminal Procedure 33. They claimed multiple errors. First, they claimed that the jury's failure to find that MS-13 engaged in narcotics trafficking was fatal to the verdict because the Indictment had not pleaded the two racketeering activities (murder and narcotics trafficking) in the alternative. Second, they argued that the proof of MS-13's involvement in murder was insufficient. Third, they asserted that the Government had failed to prove that the MS-13 enterprise had an existence separate from the charged offenses. The district court docket does not indicate when or how the district court denied the motion, but that it did so is clear from the progression of the case to sentencing.

On December 5, 2005, the district court sentenced Vasquez principally to a total of 63 years' imprisonment. The sentence consisted of 3 years' concurrent imprisonment for the conspiracy count (Count One) and each of the three assault charges (Counts Six, Seven, and Eight), as well as a consecutive 10-year term for the first firearm count (Count Twelve) and two additional consecutive 25-year terms for each of the other two firearm counts (Counts Thirteen and Fourteen). The district court imposed longer sentences for Counts Thirteen and Fourteen because it considered them to be second or subsequent firearm offenses. The court, acting sua *186 sponte, dismissed the three explosive counts (Counts Seventeen, Eighteen, and Nineteen), ostensibly on the theory that those counts were in the nature of lesser-included offenses of the firearm counts. Judgment entered on December 13, 2005.

On January 6, 2006, the district court sentenced Castro principally to 60 years plus 1 day of imprisonment. The 1 day consisted of concurrent 1-day sentences for the conspiracy count (Count One) and the three assault charges (Counts Six, Seven, and Eight). As had been the case for Vasquez, the total of 60 years' imprisonment was imposed for the three firearm offenses. The district court also dismissed the three explosive counts, for the same reasons it did so in Vasquez's case.

IV. Arguments on Appeal

On appeal, Appellants challenge their convictions and sentences on multiple grounds. With one exception, Appellants bring these challenges jointly. They devote the bulk of their argument to their claim that the district court erred in allowing the Government to call Alicea as an expert witness and to their further claim that Alicea's testimony violated the Federal Rules of Evidence and *Crawford v. Washington*, 541 U.S. 36, 124 S.Ct. 1354, 158 L.Ed.2d 177 (2004). Beyond their challenge to Alicea's testimony, Appellants argue that the district court erred in admitting evidence of narcotics trafficking and an uncharged shooting, that the Government failed to prove that MS-13 was a racketeering enterprise, and that the three firearm counts were duplicative. They also object to their sentences on the second and third firearm offenses (Counts Thirteen and Fourteen), which the district court considered to be second or subsequent offenses, because the Indictment failed to charge those offenses as second or subsequent offenses. Castro raises one additional challenge on his own, arguing that the two assault charges stemming from the Hempstead shootings were multiplicitous because the Government failed to introduce evidence that Vasquez intended to shoot more than one victim. Because the parties focused both at trial and on appeal on questions regarding Alicea's testimony, we begin with that issue.

DISCUSSION

I. Hector Alicea's Testimony as an Expert Witness

A. The Substance of Alicea's Testimony

The Government called Hector Alicea, an investigator with the New York State Police, to testify regarding MS-13's "enterprise structure and the derivation, background and migration of the MS-13 organization, its history and conflicts," as well as MS-13's "hierarchy, cliques, methods and activities, modes of communication and slang." Alicea had been an officer of the New York State Police for eighteen years, and he had been an investigator since 1992. In June 2000, five years before the trial, Alicea had been assigned to the FBI Long Island Gang Task Force. He was also the Chair of the Intelligence Committee of the East Coast Gang Investigators Association.

Prior to trial, Appellants objected to the Government's stated plan to call Alicea on the ground that Alicea would rely on "impermissible hearsay" to reach his conclusions. The accompanying memorandum of law cited to this Court's opinion in *United States v. Dukagjini*, 326 F.3d 45 (2d Cir.2003). The parties argued the motion before the district court, and the district court reserved its decision. Defense counsel continued to press the issue at trial, and Vasquez's attorney was permitted to conduct a voir dire examination of Alicea *187 prior to direct examination by the Government. In response to defense counsel's questioning, Alicea stated that he had participated in somewhere between fifteen and fifty custodial interrogations of MS-13 members. When asked whether he could distinguish between information he had learned during custodial interrogations and information he had learned elsewhere, Alicea responded that his knowledge was based on "a combination of both." At the conclusion of the voir dire, defense counsel again argued that Alicea was not qualified as an expert and that his testimony would introduce testimonial evidence in violation of *Crawford*. See 541 U.S. 36, 124 S.Ct. 1354, 158 L.Ed.2d 177. The district court then denied the motion.

Much of Alicea's testimony concerned MS-13's background. He testified about MS-13's history, its presence on Long Island, and its national and international presence; about the gang's colors, hand signs, graffiti use, naming practices, and tattoos; and about its local subunit structure, leadership structure, division of responsibilities, and membership rules. In addition, Alicea testified to more specific details about MS-13's operations. He stated that when MS-13 members fled from prosecution or needed to travel for "gang business reasons," such as "to transport narcotics," "to transport weapons," or "to commit crimes in other areas," they traveled "on a Greyhound bus" or by car. According to Alicea, MS-13 members from Virginia, California, and El Salvador had attended organizational meetings in New York State, and MS-13 leaders throughout the nation communicated with each other by telephone. He testified that MS-13 treasury money "[was] used to buy guns," to help members in prison or in other states, or to buy narcotics. Significantly, Alicea also asserted that MS-13 needed guns "to do what MS 13 does, which is, you know, shoot at rival gang members, and sometimes in the process, obviously, some people get hit."

With respect to MS-13's activities on Long Island, Alicea testified that since he had joined the Task Force in June 2000, the Task Force had seized "[p]robably between 15 and 25" firearms from MS-13 members. He further testified that Task Force members had seized ammunition, manufactured outside of New York State, from MS-13 members on Long Island. Moving on to MS-13's narcotics-related operations, Alicea told the jury that MS-13 members on Long Island had been arrested for dealing narcotics, primarily cocaine, and that the gang also occasionally dealt marijuana. Alicea also stated that MS-13 "tax [ed]" non-gang drug dealers who wished to deal drugs in bars controlled by MS-13. Most importantly, Alicea attested that MS-13 had committed "between 18 and 22, 23" murders on Long Island between June 2000 and the trial.

On cross-examination, defense counsel probed the sources of Alicea's information. Because of the importance of Alicea's answers, we quote from his testimony at length:

Q. I thought you mentioned FLS ... funded itself at the beginning from the sale of marijuana?

A. No. I was referring to the MS-13 gang as a whole.

Q. *Is it fair to say that somebody told you that?*

A. *I had read that from some of the articles that I had researched.*

Q. *Newspaper articles?*

A. *Reports from other law enforcement personnel.*

...

Q. You also told us that MS members ... put a tax on narcotics sales in certain bars; is that correct?

***188** ...

A. *I was told that by a gang member, yes.*^{FN3}

FN3. After initially characterizing how he learned about the drug tax as a casual conversation with an MS-13 member, Alicea later clarified that he learned about the drug tax during a custodial interrogation of an MS-13 member. Upon further questioning, Alicea stated that this "conversation" had taken place "at the United States Attorney's Office." The MS-13 member with whom Alicea had been "conversing" had been indicted and had not been released on bail, and he had been escorted to the "conversation" by "the U.S. marshals." When asked why that MS-13 member had been arrested, Alicea answered that the individual was "[p]art of this investigation as well, yes."

In other words, Alicea learned about the drug tax from an MS-13 member in custody during the course of this very investigation. The interrogation took place at the U.S. Attorney's Office. The record does not reflect whether the Assistant United States Attorney in charge of this case was present.

...

Q. And I believe you told us that some of those [membership] dues were used to purchase narcotics?

A. That's correct.

Q. *Is it fair to say that that was told to you also by somebody who was in custody?*

A. *In custody and some that were not.*

Q. *Well, can you tell me ... how many people in custody told you in substance that monies collected were used for narcotics?*

A. *Probably like a dozen.*

...

A. I said I am aware that there has been contact between California and New York.

Q. *And how did you become aware of it?*

A. *Listening to recordings.*

...

Q. And you stated that you got information with regard to MS-13s involved with Mexican drug cartels; is that correct?

A. Yes.

Q. *And where did you get that information from?*

A. *From research on the Internet.*

Q. Do you know the source of that information on the Internet?

A. Not off the top of my head. But I did retrieve that.

Q. Is it law enforcement or reporters?

A. *I think it is a combination of a reporter doing a story and having a conversation with law enforcement.*

...

Q. ... *[W]ith regard to the involvement of MS-13 [with] the Mexican cartels or Colombian cartels, you never interviewed anybody who told you that, it was strictly from the Internet; is that correct?*

A. *That is correct.*

***** SECTIONS OF OPINION OMITTED *****

***197 E. Alicea's Reliance on Inadmissible Evidence Under Rule 703**

At trial and on appeal, Appellants also claim that Alicea impermissibly relied on inadmissible hearsay in forming his conclusions.

Under Rule 703, experts can testify to opinions based on inadmissible evidence, including hearsay, if “experts in the field reasonably rely on such evidence in forming their opinions.” *Locascio*, 6 F.3d at 938; *accord* Fed.R.Evid. 703. Alicea unquestionably relied on hearsay evidence in forming his opinions. This hearsay evidence took the form of statements by MS-13 members given in interviews, both custodial and noncustodial, as well as statements made by other law enforcement officers, statements from intercepted telephone conversations among MS-13 members (which may or may not have been hearsay, depending on whether the conversations were in the course of and in furtherance of the charged conspiracies, *see* Fed.R.Evid. 801(d)(2)(E)), and printed and online materials. Alicea's reliance on such materials was consistent with the ordinary practices of law enforcement officers, who “routinely and reasonably rely upon hearsay in reaching their conclusions,” *Dukagjini*, 326 F.3d at 57.

[6] The expert may not, however, simply transmit that hearsay to the jury. *Id.* at 54 (“When an expert is no longer applying his extensive experience and a reliable methodology, *Daubert* teaches that the testimony should be excluded.”). Instead, the expert must form his own opinions by “applying his extensive experience and a reliable methodology” to the inadmissible materials. *Id.* at 58. Otherwise, the expert is simply “repeating hearsay evidence without applying any expertise whatsoever,” a practice that allows the Government “to circumvent the rules prohibiting hearsay.” *Id.* at 58–59.

At trial, Alicea was unable to separate the sources of his information, stating that his testimony was based on “a combination of both” custodial interrogations and other sources. On cross-examination, however, Alicea identified hearsay as the source of much of his information. For example, his testimony that the Freeport clique initially funded itself through drug sales was based on “some of the articles that [he] had researched” and “[r]eports from law enforcement personnel.” His testimony about MS-13's taxation of drug sales by non-members was based on a gang member having told him so during a custodial interrogation in this case. Alicea had learned about MS-13 treasury funds from about a dozen MS-13 members both in and out of custody. Additionally, Alicea discovered his information about MS-13's involvement in Mexican immigrant smuggling through “research on the Internet,” and more specifically from a website containing a media report and an interview with a law enforcement official. And although Alicea did not identify the source of his statements about the number of firearms the Task Force had seized and the number of murders on Long Island that MS-13 members had committed, we cannot imagine any source for

that information other than hearsay (likely consisting of police reports, Task Force meetings, conversations with other officers, or conversations with members of MS–13).

[7] Not all of Alicea's testimony was flawed, and some of the information that he provided to the jury resulted from his synthesis of various source materials. As a review of his testimony shows, however, at least some of his testimony involved merely repeating information he had read or heard—information he learned from witnesses through custodial interrogations, newspaper articles, police reports, and tape recordings. When asked how he *198 learned particular facts, Alicea did not explain how he had pieced together bits of information from different sources and reached a studied conclusion that he then gave to the jury. Instead, he testified that he had read an article, or had talked to gang members in custody (including, on at least one occasion, a gang member arrested as part of this investigation), or listened to a recording (evidence that could have been played to the jury in its original form, notwithstanding that some informants may have been identified in the process). This testimony strongly suggests that Alicea was acting not as an expert but instead as a case agent, thereby implicating our warning in *Dukagjini*—a warning the Government appears not to have heard or heeded. Alicea did not analyze his source materials so much as repeat their contents. Alicea thus provided evidence to the jury without also giving the jury the information it needed “to factor into its deliberations the reliability (or unreliability) of the particular source,” *Dukagjini*, 326 F.3d at 57 n. 7. These statements therefore violated Rule 703.

F. Alicea's Reliance on Testimonial Statements and *Crawford*

For similar reasons, some of Alicea's testimony also violated *Crawford*. In *Crawford*, 541 U.S. 36, 124 S.Ct. 1354, 158 L.Ed.2d 177, the Supreme Court held that the Confrontation Clause of the Sixth Amendment prohibits the introduction into evidence of the out-of-court testimonial statements made by an absent witness unless that witness is unavailable and the defendant had a prior opportunity for cross-examination. *Id.* at 54, 124 S.Ct. 1354. While the Court did not provide a comprehensive definition for the term “testimonial,” it placed custodial interrogations within the “core class” covered by the rule it had just announced. *Id.* at 51, 124 S.Ct. 1354; *see also Davis v. Washington*, 547 U.S. 813, 822, 126 S.Ct. 2266, 2273, 165 L.Ed.2d 224 (2006) (explaining that a custodial police interrogation after a *Miranda* warning “ ‘qualifies under any conceivable definition’ of an ‘interrogation’ ” (quoting *Crawford*, 541 U.S. at 53, 124 S.Ct. 1354)).

When faced with the intersection of the *Crawford* rule and officer experts,^{FN4} we have determined that an officer expert's testimony violates *Crawford* “if [the expert] communicated out-of-court testimonial statements of cooperating witnesses and confidential informants directly to the jury in the guise of an expert opinion.” *Lombardozi*, 491 F.3d at 72. As with a Rule 703 challenge to the expert's reliance on hearsay, the question under *Crawford* is whether the expert “applied his expertise to those statements but did not directly convey the substance of the statements to the jury,” *id.* at 73. In fact, when the inadmissible hearsay at issue is a testimonial statement, the Supreme Court has recognized that Rule 703 hearsay claims and Sixth Amendment *Crawford* claims are “are generally designed to protect similar values.” *Dukagjini*, 326 F.3d at 56 n. 6 (citing *Idaho v. Wright*, 497 U.S. 805, 814, 110 S.Ct. 3139, 111 L.Ed.2d 638 (1990)) (remarking that “[i]n this case, the appellants' hearsay and Confrontation Clause claims are coextensive,” but noting that the Supreme Court has “been careful not to equate” the two types of claims). Because it is a question of law whether an expert witness's testimony violated *Crawford*, *199 our review is de novo. *United States v. Wallace*, 447 F.3d 184, 186 (2d Cir.2006).

FN4. We have not been alone in facing questions about the collision between *Crawford* and testimony by police officers. As the First Circuit has noted, “[p]ost-*Crawford*, the admission of non-testifying informants' out-of-court testimonial statements, through the testimony of police officers, is a recurring issue in the courts of appeals.” *United States v. Maher*, 454 F.3d 13, 19 (1st Cir.2006).

[8] Alicea's reliance on hearsay is beyond doubt; a more difficult question is the extent to which that hearsay took the form of custodial statements and was thus testimonial. At trial, he testified that he had participated in between fifteen and fifty custodial interrogations of Long Island MS–13 members. He also testified that he had learned through a custodial interrogation that MS–13 taxed non-member drug dealers. The interrogation was one that he conducted as part of the same investigation that resulted in the convictions being appealed here. Among the other facts that he learned at least partially from custodial interrogations were that MS–13 treasury funds were used to purchase narcotics and that MS–13 members used interstate telephone calls to coordinate activities.

We are at a loss in understanding how Alicea might have “applied his expertise” to these statements before conveying them to the jury, such that he could have avoided “convey[ing] the substance of [those] statements to the jury.” *Lombardozi*, 491 F.3d at 73. Although the exact source of much of his information remains unclear, there was at least one fact to which Alicea testified—the drug tax—that was based directly on statements made by an MS–13 member in custody (*during the course of this very investigation*). This impugns the legitimacy of all of his testimony and strongly suggests to us that Alicea was “simply summarizing an investigation by others that [was] not part of the record.” *Dukagjini*, 326 F.3d at 54, and presenting it “in the guise of an expert opinion,” *Lombardozi*, 491 F.3d at 72. We hold, therefore, that Alicea's reliance on and repetition of out-of-court testimonial statements made by individuals during the course of custodial interrogations violated Appellants's rights under the Confrontation Clause of the Sixth Amendment.

G. Harmless Error

[9][10] Having found error in much of Alicea's testimony, vacatur is required unless we are “convinced that the error was harmless beyond a reasonable doubt.” *United States v. Reifler*, 446 F.3d 65, 87 (2d Cir.2006). Several factors are relevant when evaluating the error's likely impact: (1) the strength of the Government's case; (2) the degree to which the statement was material to a critical issue; (3) the extent to which the statement was cumulative; and (4) the degree to which the Government emphasized the inadmissible evidence in its presentation of its case. *Id.* Though all of these factors are relevant, we have stated that the strength of the Government's case is “probably the single most critical factor.”^{FN5} *Id.*

***** FOOTNOTES OMITTED *****

***200** Alicea's erroneously admitted statements were relevant to several issues in the case, including whether MS–13 was an enterprise, whether MS–13 “had an effect on interstate or foreign commerce,” whether MS–13 engaged in narcotics trafficking, and whether MS–13 engaged in acts and threats of murder. All of these issues were highly material to the case, so much so that the district judge asked the jury for special findings with regard to each of them. Because the jury found that the Government had failed to show that MS–13 engaged in narcotics trafficking, however, we will not address whether the erroneous admission of expert testimony would have been harmless with respect to that issue.

***** SECTIONS OF OPINION OMITTED *****

***208 CONCLUSION**

Because the testimony of the Government expert witness violated the Federal Rules of Evidence and the Confrontation Clause of the Sixth Amendment, and because that error was not harmless, we VACATE Appellants' convictions on all counts and REMAND to the district court in the event that the Government chooses to retry the case.

Supreme Judicial Court of Massachusetts,
Plymouth.
COMMONWEALTH
v.
George J. NARDI.

Argued May 8, 2008.
Decided Sept. 25, 2008.

CORDY, J.

***380** In the days preceding and following Christmas, 2002, Dianne Barchard failed to show up for work or maintain contact with her friends. After a missing person report was filed, her body was found in an advanced stage of decomposition on the floor of her bedroom in an apartment she shared with her son George Nardi. Nardi was subsequently indicted for her murder and, after a six-day trial, was found guilty of murder in the first degree on the theory of deliberate premeditation.

On appeal, Nardi contends that his right, pursuant to the Sixth Amendment to the United States Constitution, to confront the witnesses against him was violated when a pathologist, called by the Commonwealth, was permitted to testify to the autopsy findings of another pathologist who performed the autopsy but was unavailable to testify at the time of trial, and to his own opinion regarding the cause of Barchard's death based on those findings. Nardi also claims that the admission in evidence of an unauthenticated, allegedly forged check was prejudicial error, and that the trial judge failed to explain and distinguish the concepts of deliberation and premeditation in her instructions to the jury. We affirm the conviction and decline to grant relief under G.L. c. 278, § 33E.

1. *Trial.* In support of its claim that Nardi intentionally killed his mother sometime prior to Christmas, 2002, the Commonwealth presented the following evidence, which the jury could have concluded was credible. In the fall of 2002, thirty-seven year old George Nardi lived in a small, second-floor apartment with his fifty-nine year old mother, Dianne Barchard. While Barchard worked full time at a local Dunkin' Donuts, Nardi worked intermittently installing carpets, or at other odd jobs. He spent his time and what little money he had at the Bridgewater Citizen Club drinking and playing Yahtzee.

The mother and son had a stormy relationship. Aggravated by her constant nagging him to pay bills, Nardi called her vulgar names both to her face and in conversation with his friends. In October, 2002, Nardi was charged with driving while under the influence after an accident in which he damaged his motor vehicle beyond repair. Without transportation, Nardi was unable ***381** to work and began drinking more heavily. Tired of supporting him, Barchard pressured Nardi to find a job. During this time, arguments between Nardi and Barchard over money escalated.

By December, 2002, Barchard had told a number of her friends and neighbors that she planned to move into elderly housing when she became eligible in January, 2003; that Nardi would be ineligible to move with her; and that she intended to ask Nardi to move out of the apartment after the holidays. In response to inquiries of what she would do if he refused, Barchard said she would get a protective order. Nardi was aware of his mother's plan to move and expressed anger about it to his friends.

On December 14, 2002, Barchard took the train to Boston with Grace Levesque, her downstairs neighbor, landlady, and friend, to see a performance of the Nutcracker. At the theater, when Barchard reached the top of the stairs she expressed some leg pain and shortness of breath; Levesque jokingly commented that Barchard looked "like a heart attack ready to happen." The following afternoon, Levesque saw Barchard alive for the last time, taking her dog for a walk. Having not seen or heard from Barchard, a concerned ****1225** Levesque telephoned her apartment several times over the course of the next two weeks. Each time, Nardi answered and gave a different reason why Barchard was unable to speak with her. Stephen Souza, Barchard's other son (Nardi's stepbrother), who regularly telephoned his mother several times a week, received similar excuses from Nardi during this same period

when he telephoned to speak to his mother.

Thomas Keaney, Barchard's neighbor and her manager at Dunkin' Donuts, also telephoned Barchard's apartment after she failed to show up for work on December 16. Nardi answered the telephone and told Keaney that Barchard was sick and unable to come to work. When Keaney encountered Nardi on Christmas Day, Nardi told him that his mother had gone "down the Cape" (to Souza's house in Bourne) to recuperate. On December 27, Keaney spoke with Levesque about Barchard; both had noticed that her bedroom window was wide open in the middle of the winter, which was unusual because "she hated to be cold."

Traditionally, Nardi got together with some of his friends on Christmas Eve to exchange small gifts. However, in 2002, Nardi told his friends that he was not going to celebrate the holidays *382 because "everything sucked." Despite his earlier remarks, Nardi appeared at his friends' house on Christmas Eve with a bottle of his favorite drink and proposing a toast. He also brought gifts, including a gold anklet chain, a pair of diamond earrings, and a Nautica wallet, which were much more lavish than anything he had given in the past. At trial, Levesque testified that she was with Barchard when she purchased the gold anklet chain and Nautica wallet as gifts for her daughter-in-law and boss.

Nardi reappeared at his friends' house on December 26 and 29, looking for leftovers and complaining that his mother had not cooked Christmas dinner. He also asked his friend Paula Nee if she could cash a check his mother wrote for him because he did not have a vehicle or a driver's license. Having done this in the past, Nee agreed and cashed the check, which was signed in Barchard's name and dated December 30, 2002.^{FN1}

FN1. At trial, Nee identified a copy of the check that was admitted in evidence in lieu of the original, which was in the bank's custody. In his testimony, Nardi also identified the copy of the check, and admitted that he had signed his mother's name to it.

On the same day Nee cashed the check, Levesque telephoned the police to report Barchard as a missing person. While cross-checking the address for Barchard's apartment, the police located a default warrant for Nardi's arrest.^{FN2} They proceeded to the apartment and arrested a disheveled looking Nardi on the stairwell. When asked his mother's whereabouts, Nardi told police that Barchard was staying with Souza in Bourne. Nardi then consented to the police request to check the apartment. On entering the apartment, the police observed a locked door off the kitchen area with a flannel shirt tucked like a runner at the threshold. Believing Barchard to be in the locked room, the police forced the door open with a door jamb spreader. Immediately, the smell of decaying flesh wafted from the bedroom. Inside, police found Barchard's decomposing body covered by a blue blanket on the bedroom floor.

FN2. The arrest warrant was issued after Nardi failed to appear in court on the charge of driving while under the influence in October.

Subsequent forensic examination of the apartment revealed human blood stains, **1226 both visible and latent, in the kitchen, mainly near the washing machine, on a mop head, on Nardi's left foot, *383 and in a trail pattern from the kitchen to Barchard's bedroom. Testing revealed that the deoxyribonucleic acid (DNA) profile obtained from the stain on Nardi's foot indicated a mixture of DNA from at least two individuals; Barchard matched the major profile and Nardi was a potential contributor to the minor profile.

Doctor James Weiner from the medical examiner's office conducted an autopsy on Barchard's body on December 31, 2002, and January 1, 2003. By the time the case went to trial, Dr. Weiner had retired to Florida and had a medical condition that prevented him from traveling.^{FN3} In his place, the Commonwealth called Dr. Edward McDonough, deputy chief medical examiner for the State of Connecticut, to testify about the results of the autopsy and the cause of death. In preparation for his testimony, Dr. McDonough reviewed crime scene reports, the autopsy report Dr. Weiner had prepared, Dr. Weiner's notes and diagrams, photographs taken at and before the autopsy, microscopic tissue slides, and a toxicology report. He also spoke with Dr. Weiner about the autopsy, but only after looking at the factual material because he wanted to "form [his] own opinion without being subconsciously biased."

FN3. The parties stipulated to Dr. Weiner's unavailability.

Dr. McDonough testified to injuries observed on Barchard's face and neck during the course of the autopsy. He was then asked what conclusions and opinions he drew from those observed injuries, and opined to a reasonable degree of medical certainty that the facial injuries were consistent with a hand being placed over Barchard's mouth and nose and pressure being applied. He also testified that he “agree[d] with Dr. Weiner's assessment” that the cause of death was “consistent with asphyxia by suffocation.”^{FN4}

FN4. Dr. McDonough testified that he would not use the term “consistent with” if, in his view, any particular cause of death was equal to another cause.

The crux of Nardi's defense was that Barchard was not murdered, but died of natural causes related to her heart. This defense was outlined in counsel's opening statement (made at the beginning of the trial), in which he emphasized that the medical examiner who performed the autopsy found no “bruises on the neck” (consistent with strangulation), “no garroting marks, no punctures, no blunt objects.” He also told the jury that although *384 the medical examiner did find a small cut on Barchard's nose and two bruises near her chin, and, based on these findings, “report[ed][in] his autopsy report [that Barchard's death was] ‘consistent with asphyxiation by strangulation ...’ the medical evidence is she died of a heart attack.”^{FN5} The defense was furthered through counsel's cross-examination of Dr. McDonough and later counsel's direct examination of an expert pathologist, Dr. Mark Flomenbaum, called as a defense witness. In both of these examinations, defense counsel highlighted findings made by Dr. Weiner in his autopsy report, regarding the enlarged size of Barchard's heart and the hardening, or narrowing, of one of her main arteries.^{FN6}

FN5. In her opening, the prosecutor did not mention the autopsy report or its findings, nor did she allude to any of the testimony she expected to elicit from Dr. McDonough.

FN6. Ultimately, the testimony of Dr. Flomenbaum was not helpful to the defense. Dr. Flomenbaum testified that after reviewing the autopsy report, he was initially hesitant to agree with Dr. Weiner's opinion that the cause of death was consistent with asphyxial death. However, once he reviewed all of the crime scene information, he concluded that although a heart attack could not be ruled out, he was of the opinion that Barchard's death was consistent with asphyxia by suffocation.

****1227** Nardi also testified in his own defense. He claimed that he woke up to find his mother dead on the kitchen floor in a pool of blood; that he was paralyzed by her death; and that he did not know what to do. He contemplated suicide, but ultimately decided he wanted to spend another Christmas with his mother. He then dragged her body into the bedroom, put a blanket over her, opened the window, locked the door, and cleaned up the blood. He did not call or tell anyone about his mother's death, and lied to those who inquired as to her whereabouts.

2. *Discussion.* The principal issue raised in this case involves Nardi's Sixth Amendment challenge to the testimony of Dr. McDonough. We therefore describe that testimony in further detail.

Dr. McDonough testified to his education, training, licensure, and certification as a physician and a pathologist; his twenty years of experience working as a medical examiner for the State of Connecticut; his responsibilities as that State's deputy chief medical examiner since 1989; his participation in 6,000 to 7,000 *385 autopsies; his appearance as an expert witness in hundreds of court proceedings; and his involvement as a pathologist in “hundreds of cases” where death occurred as a result of some form of asphyxiation. He then explained the autopsy process, including the external and internal examination of the body and its organs, the documentation of that process, and the ultimate objective of the pathologist to come to an opinion with regard to the cause of death.

With respect to Barchard, Dr. McDonough testified about the circumstances in which he was asked to review the information gathered in the course of her autopsy, and to form an opinion with respect to the cause of her death. He also testified that he had performed similar reviews of autopsies done by others on many occasions, and had testified approximately twenty times as to his expert opinion in such circumstances.

When Dr. McDonough was asked whether he drew “certain conclusions based on the findings that Dr. Weiner

noted in his autopsy report and in the diagrams ... that [he] had an opportunity to review,” defense counsel objected on Sixth Amendment grounds. While conceding that “an expert can rely on other experts,” defense counsel asserted that “[t]here is no independent basis for his opinion beyond Dr. Weiner's written reports. And as such [expressing his opinion] is a violation of *Crawford* [*v. Washington*, 541 U.S. 36, 124 S.Ct. 1354, 158 L.Ed.2d 177 (2004),] and the right to confrontation....”^{FN7} The prosecutor responded by noting that Dr. **1228 McDonough was an expert witness, “testifying based on his *386 independent assessment” of the autopsy findings, and that “he would assert his own opinion” on the matter. The judge agreed, and the objection was overruled.

FN7. After requesting a sidebar, the defense counsel stated the grounds for his objection:

“This to me is violation of *Crawford*, right of confrontation. What we have—I wasn't clear. [The prosecutor] knows. There is no written report from this doctor to exactly know what he was going to do. But the appearance is that he has reviewed, there's three photographs and some microscopic slides, I'm not sure of what, the written reports of Dr. Weiner, as far as I can understand. And on the stand he's testifying to a written report by somebody else.

“Now, I know an expert can rely on other experts, but ... [t]here is no independent basis for his opinion beyond Dr. Weiner's written reports. And as such, that problem is a violation of *Crawford* [*v. Washington*, 541 U.S. 36, 124 S.Ct. 1354, 158 L.Ed.2d 177 (2004),] and the right to confrontation and I object to it.”

Dr. McDonough proceeded to testify to the injuries to Barchard's face and neck area that were noted in the autopsy report and diagrams and that could be observed in the autopsy photographs.^{FN8} He then testified to his opinion, to “a reasonable degree of medical certainty,” that those injuries “indicate force being applied to ... three different areas of the face,” which “could not have occurred by one single [impact],” and which are “consistent with a hand being placed over a mouth and nose and pressure being applied.”

FN8. The autopsy report itself was not offered or admitted in evidence.

Later in his direct testimony, Dr. McDonough testified that, although Barchard suffered from “typical American heart disease of someone who is fifty-nine years old,” including the narrowing of one of the main arteries to the heart, a slightly enlarged heart, and a hardening of the arteries, it was his opinion that “she did not die of heart disease ... [and that] the atherosclerosis in this particular case was not lethal.” He testified, without further objection, as to his opinion on the cause of Barchard's death: “My opinion is I agree with Dr. Weiner's assessment and how he certified the death as—the cause of death as consistent with asphyxia by suffocation.” There was no motion to strike the reference to “Dr. Weiner's assessment.” Dr. McDonough elaborated further, opining that Barchard's “nose and ... mouth [were] covered and therefore [she] couldn't get oxygen through those breathing passages.”

On cross-examination (in addition to emphasizing Dr. Weiner's findings regarding Barchard's heart and arteries), defense counsel questioned Dr. McDonough's familiarity with the evidence, and Dr. McDonough conceded that he had only “talked to Dr. Weiner and reviewed his file,” and did not perform the autopsy himself. Dr. McDonough recalled that the autopsy report was no more than a couple of pages long, and that he was “not sure there was much else in the file.” He also conceded that he was unfamiliar with Barchard's medical history, and that the records indicated that Dr. Weiner had not investigated the matter. *387 Defense counsel also questioned Dr. McDonough regarding the extent of Barchard's injuries, specifically that she had “no broken bones ... no trauma to the throat ... no other injuries to any other part of the body.” Dr. McDonough responded that defense counsel's observations were “correct.” On being questioned whether Barchard suffered facial lacerations, Dr. McDonough stated that the autopsy described only a “contusion or ... bruise.” Finally, defense counsel attempted to ascertain whether Dr. Weiner's findings on the first day of the autopsy, December 31, 2002, matched those of his second day, January 1, 2003.^{FN9}

FN9. Defense counsel insinuated at sidebar that a State trooper was present on December 31, 2002, and that Dr. Weiner noted no signs of trauma on that date. He indicated that he was in possession of the trooper's report that substantiated that claim, and that the trooper should be able to testify. The judge excluded the

trooper as a witness, noting that it would be confusing, as the trooper “is a lay person ... and [you] are trying to basically impeach a doctor with a lay person bystander's hearing of a comment and we don't know the circumstances of what was going on [during the autopsy] at the time.” Additionally, the judge noted that the trooper's testimony could be unfairly prejudicial to the Commonwealth, which, because of Dr. Weiner's unavailability, would not be able to “explain away this perceived inconsistency,” and because the trooper was not present on the second day of the autopsy.

On appeal, Nardi claims that the trooper's potential testimony supports his argument that Dr. McDonough's testimony violated his right to confrontation because he was unable to cross-examine Dr. Weiner regarding what occurred during the autopsy. The record appendix includes the trooper's report, the contents of which do not establish that Dr. Weiner initially reached one conclusion regarding Barchard's death on the first day of the autopsy, and then altered that conclusion on the second day. Instead, the trooper's report (dated January 16, 2003, more than two weeks after the autopsy), noted that on the first day of the autopsy, Dr. Weiner “advised [the officers who were present] of an injury to the bridge of the nose,” and made incisions into the cheeks of Barchard to determine whether there were any signs of trauma to the cheeks or jaw. The trooper's report states, “According to Dr. Weiner, the decomposition on the face of the body made it difficult to detect bruises in that area,” and he did not initially locate those bruises, but was able to on reexamination the next day. Nardi's own expert testified that this sequence was not contradictory, but rather quite common: “part of the autopsy is blunt trauma.... There is often the ability to better visualize injuries the day after the autopsy is completed. And if there is any ambiguity, it's standard to go ahead and do that. [The trooper's] report indicates that a second examination was done by the same doctor after the main autopsy was over.”

****1229** [1][2] a. *Dr. McDonough's opinion regarding cause of death.* Nardi ***388** first contends that the admission of Dr. McDonough's opinion regarding the cause of death, based principally on an autopsy which he neither performed nor attended, violated Nardi's right to confrontation as protected by the Sixth Amendment and art. 12 of the Massachusetts Declaration of Rights.^{FN10} Essentially, Nardi argues that admitting Dr. McDonough's opinion regarding the cause of death was tantamount to admitting Dr. Weiner's testimony without the opportunity to cross-examine him. We disagree. Dr. McDonough, a medical examiner with over two decades of experience, testified to his own expert opinion, and did so based on a permissible foundation. He, not Dr. Weiner, was the witness testifying to the cause of death, and Nardi was afforded ample opportunity to cross-examine him.

FN10. The Sixth Amendment to the United States Constitution provides that, “[i]n all criminal prosecutions, the accused shall enjoy the right ... to be confronted with the witnesses against him....” The right to confrontation is a “bedrock procedural guarantee [that] applies to both federal and state prosecutions.” *Crawford v. Washington*, 541 U.S. 36, 42, 124 S.Ct. 1354, 158 L.Ed.2d 177 (2004), citing *Pointer v. Texas*, 380 U.S. 400, 406, 85 S.Ct. 1065, 13 L.Ed.2d 923 (1965).

The right of a criminal defendant to confront witnesses who testify against him is also protected by art. 12 of the Massachusetts Declaration of Rights, which provides that in a criminal trial “every subject shall have a right to produce all proofs, that may be favorable to him [and] to meet the witnesses against him face to face.” The State Constitution has been interpreted to provide a criminal defendant more protection than the Sixth Amendment in certain respects, see *Commonwealth v. Amirault*, 424 Mass. 618, 628–632, 677 N.E.2d 652 (1997), but when the question involves the relationship between the hearsay rule and its exceptions, on the one hand, and the right to confrontation, on the other hand, “the protection provided by art. 12 is coextensive with the guarantees of the Sixth Amendment....” *Commonwealth v. DeOliveira*, 447 Mass. 56, 57 n. 1, 849 N.E.2d 218 (2006).

[3] “[Medical] examiners, as expert witnesses, may base their opinions on (1) facts personally observed; (2) evidence already in the records or which the parties represent will be admitted during the course of the proceedings, assumed to be true in questions put to the expert witnesses; and (3) ‘facts or data not in evidence if the facts or data are independently admissible and are a permissible basis for an expert to consider in formulating an opinion.’ ” *Commonwealth v. Markvart*, ****1230** 437 Mass. 331, 337, 771 N.E.2d 778 (2002), quoting *Department of Youth Servs. v. A Juvenile*, 398 Mass. 516, 531, 499 N.E.2d 812 (1986). Dr. McDonough's opinion that the cause of Barchard's death was “consistent with asphyxia by suffocation”***389** was based on his review of all three types of

permissible evidence. He personally reviewed autopsy photographs and pathology samples. He reviewed evidence that had been introduced at trial prior to his testimony, specifically photographs and diagrams of the blood evidence at the crime scene, and statements regarding the fifteen-day period during which Barchard's body decomposed in her apartment. He also reviewed Dr. Weiner's autopsy report, which was a "permissible basis for an expert to consider in formulating an opinion," *Commonwealth v. Markvart, supra*, because "the underlying 'facts or data' contained [therein] would potentially [have been] admissible through appropriate witnesses." *Id.*^{FN11}

FN11. The parties do not dispute that Dr. Weiner, were he available, could testify to the contents of the autopsy report. As we noted in *Commonwealth v. Markvart*, 437 Mass. 331, 337 n. 4, 771 N.E.2d 778 (2002), "the form in which information is ordinarily transmitted to an expert witness is often one that is not itself independently admissible. For example, an expert may be provided with written witness statements, or copies of documents that do not bear the requisite authentication for admissibility, or an attorney's summary of relevant facts. It is not the form of the presentation to the expert that governs whether an opinion may be based thereon, but the nature of the facts or data contained in that presentation."

We addressed similar testimony in *Commonwealth v. DelValle*, 443 Mass. 782, 791, 824 N.E.2d 830 (2005), where a medical examiner "testified over objection based on his review of an autopsy report, diagrams, and photographs prepared eleven years prior to trial, by another medical examiner who was no longer available to testify." The defendant in that case asserted that the expert had "strayed far beyond the scope of the autopsy report to speculate as to the cause of death and the amount of force necessary to inflict the victim's injuries." *Id.*^{FN12} We concluded that the expert's testimony was proper, as it was "based on the nature and severity of the injuries depicted in the autopsy report and photographs, as well as his own considerable experience as a pathologist." *Id.* at 792, 824 N.E.2d 830. Although in the instant case, Nardi claims that the testimony of Dr. McDonough hewed too closely to the report and conclusions of Dr. Weiner, the same reasoning applies. Dr. McDonough considered a range of materials, including *390 but not limited to Dr. Weiner's autopsy report, and applied his own expertise (honed over the course of thousands of autopsies) to reach an independent conclusion regarding the cause of Barchard's death. That he reached essentially the same conclusion as to the cause of death as Dr. Weiner is of no consequence. *Id.* See *Commonwealth v. Hill*, 54 Mass.App.Ct. 690, 697, 767 N.E.2d 1078 (2002) (although expert neither performed nor supervised DNA testing, her "opinions [that] were primarily based on her own experience and expertise as independently applied to test results" were admissible).

FN12. The defendant in *Commonwealth v. DelValle*, 443 Mass. 782, 824 N.E.2d 830 (2005), did not raise a Sixth Amendment confrontation claim with respect to the expert testimony.

The fact that Dr. McDonough's expert opinion on the cause of Barchard's death was based, in large part, on findings made during the course of an autopsy that he did not perform does not infringe on Nardi's right to confrontation concerning this issue. In *Commonwealth v. Daye*, 411 Mass. 719, 742, 587 N.E.2d 194 (1992), the **1231 defendants argued that a bullet lead analyst relied on "facts and data gathered by others who were not before the court, thus depriving the defendants of the confrontation and cross-examination to which they were entitled." There, the expert testified that he prepared the bullet lead samples in his own laboratory, and then sent them out for further testing; his testimony was based, in part, on the results of testing conducted by others. *Id.* We concluded that "[n]othing in the record shows that [the expert's] reliance on facts and data gathered by others not before the court fell outside the [permissible bases of expert testimony established] in *Department of Youth Servs. v. A Juvenile, supra* at 532, 499 N.E.2d 812." *Commonwealth v. Daye, supra* at 743, 587 N.E.2d 194. The expert may, however, "be required to disclose the underlying facts or data on cross-examination," including that he did not personally conduct the relevant tests and examinations. *Id.*, quoting Proposed Mass. R. Evid. 705. The thrust of Proposed Mass. R. Evid. 705, as approved in *Department of Youth Servs. v. A Juvenile, supra*, "is to leave inquiry regarding the basis of expert testimony to cross examination, which is considered an adequate safeguard." *Commonwealth v. Daye, supra* at 743, 587 N.E.2d 194, quoting the Advisory Committee's Note on Proposed Mass. R. Evid. 705.

Because Dr. McDonough's opinion as to the cause of Barchard's death was "based on the nature and severity of the *391 injuries depicted in the autopsy report and photographs, as well as on his own considerable experience as a pathologist," *Commonwealth v. DelValle, supra* at 792, 824 N.E.2d 830, and because defense counsel had the opportunity to question the foundation of this opinion on cross-examination, its admission in evidence did not deprive Nardi of his right of confrontation. *Commonwealth v. Daye, supra* at 743, 587 N.E.2d 194.

b. *Dr. McDonough's direct testimony about the foundation of his opinion.* Nardi argues, in the alternative, that even if Dr. McDonough's opinion as to the cause of Barchard's death was admissible, his testimony on direct examination improperly included reference to many of the findings contained in Dr. Weiner's report (on which he relied in reaching that opinion); that those findings were inadmissible hearsay; and that their improper admission through Dr. McDonough's direct testimony violated Nardi's right to confrontation, resulting in prejudicial error warranting a new trial. While we agree that Dr. McDonough should not have been permitted to testify to the findings in the autopsy report on direct examination, see *Commonwealth v. McNickles*, 434 Mass. 839, 856, 753 N.E.2d 131 (2001),^{FN13} we conclude that this error does not warrant a new trial.

FN13. "Our approach to an expert's use of facts and data that are not themselves admitted in evidence at trial 'allows a witness to state his opinion or inferences he has drawn from the evidence without first setting out during direct examination the underlying facts or data on which the testimony is based.' " *Commonwealth v. Markvart*, 437 Mass. 331, 338, 771 N.E.2d 778 (2002), quoting P.J. Liacos, Massachusetts Evidence § 7.7.4, at 414 (7th ed.1999). "Those details may be elicited during cross-examination ... but the decision whether to do so is a strategic one left to the opposing party. The expert's direct examination may not be used to put before the jury facts that are not (and will not be) properly in evidence" (citation omitted). *Id.*

In the wake of the United States Supreme Court's decisions in *Crawford v. Washington*, 541 U.S. 36, 124 S.Ct. 1354, 158 L.Ed.2d 177 (2004) (*Crawford*), and *Davis v. Washington*, 547 U.S. 813, 126 S.Ct. 2266, 165 L.Ed.2d 224 (2006) **1232 (*Davis*), we have held that the admissibility of an out-of-court statement is to be determined by a two-part inquiry. "[A] statement must first be evaluated for admissibility under normal evidence rules, i.e., whether it qualifies as a hearsay exception." *Commonwealth v. Burgess*, 450 Mass. 422, 431 n. 6, 879 N.E.2d 63 (2008). "Then, the statement must be appraised under the criteria of *Crawford-Davis* and *Commonwealth v. Gonsalves*, 445 Mass. 1, 3, 833 N.E.2d 549 (2005) [, cert. denied, *392 548 U.S. 926, 126 S.Ct. 2980, 2982, 165 L.Ed.2d 990, 989 (2006)], to determine if it satisfies the confrontation clause of the Sixth Amendment," *id.*, that is, whether the statement was testimonial. The findings testified to by Dr. McDonough fail to satisfy either part of this inquiry: they are inadmissible hearsay and testimonial in nature.

[4] On the first issue, inadmissible hearsay, Dr. McDonough testified in some detail regarding the autopsy examination performed by Dr. Weiner and the findings he recorded in the autopsy report. Specifically, Dr. McDonough described Dr. Weiner's external and internal examinations; Dr. Weiner's findings with respect to the rigidity of Barchard's body (and the relevance of those findings to time of death); and the locations where Dr. Weiner found contusions that he concluded were consistent with facial trauma. Dr. McDonough also referred repeatedly to a diagram that Dr. Weiner drew in his autopsy report to mark the locations of that trauma, and made use of a blown up version of that diagram in his testimony. Additionally, he testified to Dr. Weiner's examination of Barchard's heart, including Dr. Weiner's findings that her heart was slightly enlarged, that one of her major arteries was sixty per cent blocked, and that she suffered from hardening of the arteries. When asked his opinion as to the cause of death, McDonough stated: "My opinion is *I agree with Dr. Weiner's assessment and how he certified the death* as ... consistent with asphyxia by suffocation" (emphasis added).

[5] This testimony is plainly hearsay insofar as Dr. McDonough was testifying to, and asserting the truth of, statements recorded by Dr. Weiner in his autopsy report. See *Commonwealth v. Cohen*, 412 Mass. 375, 393, 589 N.E.2d 289 (1992), quoting McCormick, Evidence § 246, at 729 (3d ed. 1984) (" 'Hearsay' is a statement, other than one made by the declarant while testifying at the trial or hearing, offered in evidence to prove the truth of the matter asserted"). "It is settled that an expert witness may not, under the guise of stating the reasons for his opinion, testify to matters of hearsay in the course of his direct examination unless such matters are admissible under some statutory or other recognized exception to the hearsay rule." *Grant v. Lewis/Boyle, Inc.*, 408 Mass. 269, 273, 557 N.E.2d 1136 (1990), quoting *Kelly Realty Co. v. Commonwealth*, 3 Mass.App.Ct. 54, 55-56, 323 N.E.2d 350 (1975). See *Commonwealth v. McNickles*, 434 Mass. 839, 857, 753 N.E.2d 131 (2001) ("We *393 adhere to our position that an expert witness may not, on direct examination, present the specifics of hearsay information on which she has relied in reaching her opinion").

[6] The Commonwealth asserts, however, that there was no evidentiary error because the autopsy report about

which Dr. McDonough testified fell within a well-established hearsay exception, namely that it was a public or official record. While certain elements of the report, specifically those involving “no judgment or discretion on the part of the [medical examiner],” *Commonwealth v. Verde*, 444 Mass. 279, 282, 827 N.E.2d 701 (2005), like toxicology test results, may be admitted under that **1233 exception,^{FN14} others may not: “records of *investigations and inquiries* conducted, either voluntarily or pursuant to requirement of law, by public officers concerning *causes and effects* involving the exercise of *judgment and discretion*, expressions of opinion, and making conclusions are not admissible in evidence as public records” (emphasis added). *Commonwealth v. Slavski*, 245 Mass. 405, 417, 140 N.E. 465 (1923). Dr. Weiner's autopsy was undertaken as an *investigation and inquiry* into the *cause* of Barchard's death, as required by law. G.L. c. 38, § 4 (“Upon notification of a [suspicious] death ... the chief medical examiner or his designee shall carefully inquire into the cause and circumstances of the death”). See G.L. c. 38, § 7 (“If, during the ... investigation, the medical examiner is of the opinion that the death may have been caused by the act ... of another, he shall at once notify the district attorney ...”). Dr. Weiner's findings with respect to the presence and location of facial trauma, the extent of Barchard's heart disease, and his ultimate opinion as to the cause of her death, undoubtedly involved the exercise of “judgment and discretion.” See *Jewett v. Boston Elevated Ry.*, 219 Mass. 528, 530, 107 N.E. 433 (1914) (“statements [in autopsy report] as to the conclusions reached and as to the cause of death were not statements of facts within the medical examiner's own observation, but of matters of opinion reached upon his medical knowledge or by way of *394 inference from answers to his inquiries or from facts observed by himself or the witnesses at the autopsy”). Thus, even if parts of Dr. Weiner's report may be considered an official record, “Massachusetts common law ... [does not permit] admission of ‘evaluative reports’ or opinions or conclusions in government reports.” *Mattoon v. Pittsfield*, 56 Mass.App.Ct. 124, 135, 775 N.E.2d 770 (2002), quoting *Herson v. New Boston Garden Corp.*, 40 Mass.App.Ct. 779, 792, 667 N.E.2d 907 (1996).

FN14. The issue of the admissibility of a certificate of drug analysis is currently before the United States Supreme Court. See *Commonwealth v. Melendez–Diaz*, 69 Mass.App.Ct. 1114, 870 N.E.2d 676 (2007), cert. granted, — U.S. —, 128 S.Ct. 1647, 170 L.Ed.2d 352 (2008). In its unpublished memorandum and order pursuant to its rule 1:28 in the *Melendez–Diaz* case, the Appeals Court substantially relied on our decision in *Commonwealth v. Verde*, 444 Mass. 279, 282, 827 N.E.2d 701 (2005).

[7] With respect to our inquiry into whether statements made by Dr. Weiner in his report were testimonial, *Commonwealth v. Burgess*, 450 Mass. 422, 431 n. 6, 879 N.E.2d 63 (2008), it is readily apparent that they were. Such statements are testimonial in fact, because “a reasonable person in [Dr. Weiner's] position would anticipate his [findings and conclusions] being used against the accused in investigating and prosecuting a crime.” *Commonwealth v. Gonsalves*, 445 Mass. 1, 3, 833 N.E.2d 549 (2005).

[8][9] Because the findings and conclusions contained in Dr. Weiner's autopsy report were testimonial hearsay, and Nardi was deprived of the opportunity to cross-examine Dr. Weiner, we must determine whether their erroneous admission in evidence requires a new trial. Where an objection is properly preserved, we evaluate the admission of constitutionally proscribed evidence to determine whether it was harmless beyond a reasonable doubt. *Commonwealth v. Galicia*, 447 Mass. 737, 746, 857 N.E.2d 463 (2006). “If the defendant's constitutional objection was not preserved, we still review the claim to determine whether there was a substantial risk of a miscarriage of justice,” *id.*, or in the case of our review pursuant to G.L. c. 278, **1234 § 33E, a substantial likelihood of a miscarriage of justice.

It is not apparent in the record that Nardi raised an objection to Dr. McDonough's testimony beyond his objection concerning the doctor's opinion as to the cause of Barchard's death, testimony that we have held did not violate Nardi's right to confrontation. While defense counsel indicated his concern that Dr. McDonough would be “testifying to,” rather than relying on, “a written report by somebody else,” he also expressly stated that the “*Crawford* violation” was that Dr. McDonough's opinion testimony was based entirely on an autopsy report written by Dr. Weiner. Considered by itself, it is doubtful that this objection*395 would be sufficient to preserve the constitutional claim for the remainder of Dr. McDonough's testimony. *Commonwealth v. Galicia, supra*. “However, ‘[t]he adequacy of the objection has to be assessed in the context of the trial as a whole.’ ” *Id.*, quoting *Commonwealth v. Koney*, 421 Mass. 295, 299, 657 N.E.2d 210 (1995). Here the defense, as outlined in defense counsel's opening statement, depended on getting at least some of Dr. Weiner's findings before the jury. While there was a reason for the defendant to keep Dr. McDonough from offering his own opinion as to the cause of Barchard's death, there is little question that if Dr. Weiner's findings had not come in during Dr. McDonough's direct

examination, they would have properly come in through cross-examination and redirect examination. Thus, “in the context of the trial as a whole,” Nardi’s objection is best understood as being limited to Dr. McDonough’s opinion regarding the cause of Barchard’s death and not extending to evidence of Dr. Weiner’s other findings. Indeed, even when Dr. McDonough testified to his opinion on the cause of death, and did so by “agree[ing] with Dr. Weiner’s assessment,” there was no motion to strike the reference.^{FN15} The objection to the testimony about Dr. Weiner’s findings was not preserved.

FN15. As noted, the prosecutor made no mention of the autopsy findings or to the expected testimony from the medical examiner in her opening statement. See note 5, *supra*. By contrast, in his opening, defense counsel discussed the autopsy report’s findings and even told the jury that Dr. Weiner had concluded that the cause of Barchard’s death was “consistent with asphyxia by suffocation.”

[10] In examining whether an unpreserved error created a substantial likelihood of a miscarriage of justice, we also look to the trial as a whole. *Commonwealth v. Montez*, 450 Mass. 736, 750, 881 N.E.2d 753 (2008). The most important medical evidence from the Commonwealth’s point of view was Dr. McDonough’s opinion as to the cause of death. That opinion was properly admitted in evidence. Dr. Weiner’s subsidiary findings, however, were equally, if not more, important to the defense. That those findings were admitted in evidence in the course of Dr. McDonough’s direct testimony, without objection, is consistent with the defense strategy announced at the outset of the trial. And indeed, the defense expert, Dr. Flomenbaum, made use of and referenced those findings in his testimony.^{FN16} The admission of this testimony *396 did not **1235 create a substantial likelihood of a miscarriage of justice.

FN16. Dr. Flomenbaum testified to the contents of Dr. Weiner’s autopsy reports, including Dr. Weiner’s examination of Barchard’s heart. Among other things, Dr. Flomenbaum stated that Dr. Weiner’s autopsy report reflected that Barchard had a sixty per cent “narrowing of her coronary vessels,” that she had “a little bit of [heart] disease,” and “high blood pressure.” He also testified that “[t]he only thing[s] anatomically wrong with her heart [were] a build up in her vessels and an enlargement of size. Neither of those findings would be responsible for killing 98 percent of the people who had those.”

***** REMAINDER OF OPINION OMITTED *****

Supreme Court of North Carolina.
STATE of North Carolina
v.
Dane LOCKLEAR, Jr.

No. 578A05.
Aug. 28, 2009.

TIMMONS-GOODSON, Justice.

*440 Defendant Dane Locklear, Jr. was indicted for one count each of first-degree murder, felonious larceny, burning of personal property, and first-degree arson. The case was tried capitally, and on 1 June 2005, the jury returned verdicts finding defendant guilty of the first-degree murder of Frances Singh Persad on the basis of malice, premeditation, and deliberation, and also under the felony murder rule on the bases of assault with a deadly weapon inflicting serious injury *441 and arson. The jury also found defendant guilty of misdemeanor larceny, burning of personal property, and first-degree arson. Following a mental retardation hearing, the jury found defendant was not mentally retarded. The capital sentencing hearing proceeded, after which the jury recommended a sentence of death.

Defendant appealed his capital conviction to this Court, and we allowed his motion to bypass the Court of Appeals as to his other convictions. We find no error in defendant's trial, but we vacate his death sentence and remand for a new sentencing hearing.

FACTUAL BACKGROUND

The State presented evidence that in the early morning hours of 27 February 2000, firefighters responded to reports of a fire at the residence of Frances Singh Persad at 52 Beck Street in Red Springs, North Carolina. When they arrived at the scene, firefighters found the home engulfed in flames. After extinguishing the fire, firefighters discovered the charred body of Persad lying on the floor of the front bedroom. A bloodied one-by-four board, a bed slat, lay next to her body. Persad's vehicle, a red Ford Mustang, was not at the home. The shotgun that Persad normally kept in her bedroom was also missing. The subsequent criminal investigation revealed the fire was intentionally set and that Persad died from carbon monoxide poisoning. Persad also sustained blunt-force injuries to her head and sharp-force injuries to her neck. Investigators soon focused their attention on defendant, whom Persad had befriended while he was a patient at Southeastern Regional Medical Center. Persad worked at the medical center as a psychiatric nurse, and her initial friendship with defendant had developed into a sexual relationship.

Several days later, on 1 March 2000, a land surveyor working in a rural wooded area in Robeson County discovered Ms. Persad's red Ford Mustang. The wooded area was near a canal with a dirt road beside it, known as "Canal Road." The Mustang was burned down to bare metal and was still smoking. Defendant's extended family resided in the area. Upon searching the area, police found defendant hiding in a nearby house.

Heather Justice testified on behalf of the State. Justice stated defendant was an acquaintance of her former boyfriend, John Campbell. Justice testified defendant sold Campbell a "very large black weapon," a gun, in exchange for "a little over 200 pieces of dope" worth "\$200." Other witnesses established that this was the *442 same shotgun belonging to Persad. Justice further testified that defendant and Campbell arrived at her residence one Sunday early morning in February of 2000. Defendant was driving a red Mustang, and Campbell was sitting in the passenger seat of the vehicle. Campbell came into the house and asked whether defendant could use the bathroom. As defendant entered the residence, Justice noticed he appeared to have fresh blood on his hands and clothes. After defendant went into the bathroom, Justice asked Campbell "what was going on, what did he do-what was he bringing people with blood in my house for." Defendant left approximately ten minutes later.

The State introduced into evidence several statements defendant gave to law enforcement officers in which he confessed to killing Persad. One statement was audiotaped, while the second was videotaped. Defendant told Detective Ricky Britt of the Robeson **299 County Sheriff's Office and several other law enforcement officers that Persad picked him up on the evening of 26 February 2000 after completing a second shift at the hospital. Persad

drove them in her red Mustang to her home. Defendant and Persad were drinking in bed together after sexual intercourse when they began to argue. Although defendant could not recall the exact subject of their disagreement, defendant stated that Persad was angry with him because he had taken a shotgun from her house a few days earlier. The argument “upset” him, and Persad was “screaming” at him. Defendant told Detective Britt that “the next thing [he knew] is that [he] had grabbed a two by four that was in her room ... and [] began beating her with it.” According to defendant, Persad attempted to reach the telephone to call 911, but he beat her down. She said she “didn’t want to die.” Defendant continued to beat Persad in the head with the board until he believed she was dead. He checked her heartbeat, but “knew she was gone.” She bled profusely, and defendant had “a lot of blood” on him. Defendant then set the curtains and couch on fire and fled the home. He drove Persad's Mustang to a river, where he attempted to wash the blood from his body and clothes. Defendant eventually drove to a rural area near Canal Road and burned the Mustang.

While confessing to Persad's murder, defendant confessed to a second killing that occurred several years earlier. Defendant told Detective Britt he killed a young woman named Cynthia Wheeler, who was a student at the University of North Carolina at Pembroke at the time of her disappearance in June of 1997. At that time, investigators found Wheeler's vehicle at the same location near the canal *443 where Persad's vehicle was discovered. Like Persad's Mustang, Wheeler's vehicle was burned down to bare metal. The skeletal remains of Wheeler's body were found several months later along the same canal, approximately one to two miles away from where Wheeler's burned vehicle was located. Defendant told Detective Britt that he and Wheeler engaged in sexual intercourse in her vehicle, but that Wheeler became angry when she discovered defendant was not wearing a condom. Wheeler scratched defendant's face, which “upset” him. Defendant beat Wheeler in the face, then allowed her to dress. Wheeler told defendant she intended to tell law enforcement officers that defendant raped her, then began to run away. Defendant caught her, then beat and choked her. Wheeler told him, “[p]lease don't do this.” At some point, defendant realized he had “gone too far” and “tried to wake her up.” He checked her pulse and heartbeat. When he realized Wheeler was dead, he dumped her body in a wooded area along the canal and burned her vehicle.

The jury found defendant guilty of the first-degree murder of Frances Persad on the basis of premeditation and deliberation, as well as under the felony murder rule, with both assault with a deadly weapon inflicting serious injury and arson as underlying felonies. The case proceeded to sentencing.

***** SECTIONS OF OPINION OMITTED *****

****304 *451** *Crawford issue of admitting opinion evidence*

[13][14] Defendant argues the trial court erred in admitting opinion testimony as to the cause of Wheeler's death rendered by a non-testifying pathologist and opinion testimony from a non-testifying dentist about the identity of Wheeler's remains. Although we agree that admission of the testimony violated the dictates of *Crawford* and was therefore erroneous, we find such error harmless beyond a reasonable doubt.

The State tendered John D. Butts, M.D., the Chief Medical Examiner for North Carolina, as an expert in the field of forensic pathology. Dr. Butts testified as to State's Exhibit 101, which Dr. Butts identified as a copy of an autopsy report for Cynthia Wheeler. The autopsy report was prepared by Karen Chancellor, M.D., a forensic pathologist who performed the autopsy on Wheeler's body in 1997. Dr. Butts testified that, according to the autopsy report prepared by Dr. Chancellor, the cause of Wheeler's death was blunt force injuries to the chest and head. Dr. Butts also testified to the results of a forensic dental analysis performed by Dr. Jeffrey Burkes, a consultant on the faculty of the University of North Carolina School of Dentistry. The forensic dental analysis was included in the autopsy report. Dr. Butts stated that, by comparing Wheeler's dental records to the skeletal remains, Dr. Burkes positively identified the body as that of Wheeler. Neither Dr. Chancellor nor Dr. Burkes testified.

Defense counsel objected to Dr. Butts's testimony regarding Wheeler's autopsy, as well as to admission of the autopsy report, on the grounds that, *inter alia*, admission of the evidence violated defendant's Sixth Amendment right to confront the witnesses against him. The trial court overruled the objections. Defendant argues the trial court erred in admitting opinion testimony by non-testifying witnesses as to the cause of Wheeler's death and the identity of her remains. We agree, but determine that admission of the evidence did not prejudice defendant.

[15][16] *452 The Confrontation Clause of the Sixth Amendment bars admission of testimonial evidence unless the declarant is unavailable to testify and the accused has had a prior opportunity to cross-examine the declarant. *Crawford v. Washington*, 541 U.S. 36, 68, 124 S.Ct. 1354, 1374, 158 L.Ed.2d 177, 203 (2004); *State v. Lewis*, 361 N.C. 541, 545, 648 S.E.2d 824, 827 (2007). The State argues the autopsy report was not “testimonial” and therefore, is not barred by the Confrontation Clause. However, the United States Supreme Court squarely rejected this argument in the recent case of *Melendez-Diaz v. Massachusetts*, --- U.S. ---, 129 S.Ct. 2527, 174 L.Ed.2d 314 (2009). There, the defendant objected on *Crawford* grounds to the introduction of a forensic analysis performed by a non-testifying analyst. The evidence at issue identified a substance seized by law enforcement officers and linked to defendant as cocaine. The Court determined that forensic analyses qualify as “testimonial” statements, **305 and forensic analysts are “witnesses” to which the confrontation clause applies. *See id.* at ---, 129 S.Ct. at 2532, 174 L.Ed.2d at ---. The Court specifically referenced autopsy examinations as one such kind of forensic analyses. *See id.* at ---, n. 5, 129 S.Ct. at 2536, n. 5, 174 L.Ed.2d at ---, n. 5. Thus, when the State seeks to introduce forensic analyses, “[a]bsent a showing that the analysts [are] unavailable to testify at trial and that petitioner had a prior opportunity to cross-examine them” such evidence is inadmissible under *Crawford*. *Id.* at ---, 129 S.Ct. at 2532, 174 L.Ed.2d at ---; *see also State v. Watson*, 281 N.C. 221, 229-32, 188 S.E.2d 289, 294-96 (holding the trial court erred in admitting evidence of the cause of the victim's death contained in the victim's death certificate), *cert. denied*, 409 U.S. 1043, 93 S.Ct. 537, 34 L.Ed.2d 493 (1972).

Here, the State sought to introduce evidence of forensic analyses performed by a forensic pathologist and a forensic dentist who did not testify. The State failed to show that either witness was unavailable to testify or that defendant had been given a prior opportunity to cross-examine them. The admission of such evidence violated defendant's constitutional right to confront the witnesses against him, and the trial court therefore erred in overruling defendant's objections. We must now determine whether admission of the evidence was harmless beyond a reasonable doubt. *See* N.C.G.S. § 15A-1443(b) (2007) (“A violation of the defendant's rights under the Constitution of the United States is prejudicial unless ... it was harmless beyond a reasonable doubt.”); *Lewis*, 361 N.C. at 549, 648 S.E.2d at 830.

*453 The evidence erroneously admitted tended to establish two facts: (1) positive identification of Wheeler's body; and (2) the cause of Wheeler's death. Neither fact was critical, however, to the State's case against defendant for the murder of Persad. The State presented copious evidence that defendant killed Persad, including defendant's confessions to the crime. The State also presented other evidence of Wheeler's murder. Defendant admitted he killed Wheeler by beating and choking her to death and that he then burned her vehicle. We conclude the erroneously admitted evidence regarding Wheeler's cause of death and the identification of her body would not have influenced the jury's verdict. *See Watson*, 281 N.C. at 233, 188 S.E.2d at 296 (determining that, in light of the overwhelming evidence of the victim's murder by the defendant, “the minds of an average jury would not have found the evidence less persuasive had the conclusory evidence contained in the certified copy of the death certificate [of the victim] been excluded. The admission of the evidence contained in the certified copy of the death certificate was at most harmless error beyond a reasonable doubt.” (citations omitted)).

[17] In addition, as discussed above, the State presented evidence of Wheeler's murder to show defendant's knowledge, plan, opportunity, intent, *modus operandi*, and motive to commit the premeditated and deliberate murder of Persad. However, the jury also found defendant guilty under the felony murder rule, for which the erroneously admitted autopsy evidence regarding Wheeler played no role. Thus, even assuming *arguendo* that the wrongful admission of the autopsy evidence influenced the jury to find that defendant murdered Persad with premeditation and deliberation, that evidence would not affect the jury's verdict of guilt under the felony murder rule. Defendant has failed to show prejudice arising from this error.

***** REMAINDER OF OPINION AND DISSENTING OPINIONS OMITTED *****

United States Court of Appeals,
Ninth Circuit.
UNITED STATES of America, Plaintiff-Appellant,
v.
Yacov YIDA, Defendant-Appellee.

No. 06-10460.
Argued and Submitted Feb. 15, 2007.
Filed Aug. 16, 2007.

GOULD, Circuit Judge:

The United States government appeals the district court's order excluding the former trial testimony of witness David Reziniano in the retrial of defendant Yacov Yida. We have jurisdiction pursuant to 28 U.S.C. § 1291 and 18 U.S.C. § 3731. We affirm the district court's decision excluding Reziniano's testimony.^{FN1}

FN1. In a published order following oral argument, we invited amicus briefing on the important issues raised in this appeal. *See United States v. Yida*, 478 F.3d 1068 (9th Cir.2007). We thank the National Association of Criminal Defense Lawyers, Professor Richard D. Friedman from the University of Michigan Law School, and Aaron Petty, a recent graduate of the University of Michigan Law School, for their responsive amicus briefs, which we received in addition to the parties' supplemental briefing.

I

In 1999 and 2000, Yida, Reziniano, and other co-conspirators allegedly participated in an ecstasy smuggling operation. Reziniano pleaded guilty in 2004 to conspiring to import ecstasy and was sentenced to a term of sixty-three months. On November 25, 2005, Reziniano, a native and citizen of Israel, was released into the custody of the Department of Homeland Security ("DHS") for deportation proceedings. Reziniano did not contest the proceedings and on December 7, 2005, an immigration judge ordered his deportation.

Special Agent Catherine Miller of Immigration and Customs Enforcement obtained a material witness warrant for Reziniano on December 8, 2005, as he was scheduled to testify at Yida's upcoming trial. Reziniano remained in custody pursuant to the material witness warrant for about five months before and during Yida's April 2006 trial. During his incarceration, Reziniano complained that his medical and dietary needs were not being adequately addressed, and that he wished to be released from custody and deported.^{FN2}

FN2. At no time during the five months that Reziniano was detained as a material witness did the government or Reziniano seek bail. After January 13, 2006, neither the government nor Reziniano complained to the district court about the conditions of Reziniano's confinement or sought an expedited trial date to accommodate his desire to be deported as soon as possible.

*948 On April 4, 2006, Reziniano testified that he had conspired with Yida to import ecstasy into the United States via Europe on multiple occasions.^{FN3} According to the government, "Reziniano proved to be a critical witness at trial" because he (1) corroborated testimony from other witnesses; (2) "presented substantial first-hand information about Yida's role in the charged conspiracy that no other witness could provide"; and (3) "testified about the origins of the conspiracy and described in detail how he and Yida had smuggled ecstasy into the United States." Reziniano was thoroughly cross-examined at trial by Yida's defense counsel. The jury reached an impasse in its deliberations, and the district court declared a mistrial on April 13, 2006. At an April 26 status conference, the court set a new trial date of July 24, 2006, which was later advanced to July 17.

FN3. In addition to his testimony on his conspiracy with Yida, Reziniano testified that he had been involved in other narcotics-related activities for which he had not been prosecuted, and that he was at one time affiliated with a South American drug cartel. Reziniano further testified that he was involved in laundering money for drug dealers, possessed identification under three different names, and was known at various times as David Reziniano, David Freeman, David Rabin, Leo Horowitz, and Reggie.

After the district court declared a mistrial, Reziniano's attorney, Randy Sue Pollock, contacted the government

in an attempt to resume her client's deportation proceedings. The government explored whether it would be possible to release Reziniano and arrange for his return in the event of a retrial. The government did not, however, notify the district court or Yida's defense counsel about these conversations or about Reziniano's subsequent release and deportation. After receiving assurances from both Reziniano and Pollock that Reziniano would return to testify if asked, and receiving advance approval from DHS to have him paroled back into the United States, the government agreed to Reziniano's deportation. The government also agreed to pay for Reziniano's airfare, hotel, food, and incidental expenses if it called upon him to testify at the retrial. After the government released Reziniano's material witness warrant, he was returned to DHS custody and deported to Israel.^{FN4}

FN4. The government advises that it decided not to serve "Reziniano with a trial subpoena prior to releasing him because no trial date had yet been set, because such a subpoena would have been unenforceable once Reziniano left the United States, and because it was concerned that the invocation of compulsory process would alienate Reziniano and make him less likely to honor his commitment to return."

Pollock continued to communicate with Reziniano after his deportation in order to keep him apprised of developments in the Yida case. On June 12, 2006, Reziniano called Pollock and said that he would not return to the United States to testify because "he needed to obtain medical treatment and ... he had not been well since his return to Israel." Pollock and another former attorney for Reziniano, Michael Stepanian, were unable to convince Reziniano to return to testify. They then notified Assistant United States Attorney Dana Wagner and gave him Reziniano's contact information.

Both Wagner and Special Agent Miller called Reziniano and tried to convince him to fulfill his promise to return and testify. Reziniano told the government that he was having medical problems related to the *949 conditions he had developed in custody, including a bleeding stomach that might require surgery, and that he was unwilling to leave Israel until these problems were resolved. He estimated that it would be months until he would be able to travel internationally. The government reiterated that it would pay all expenses related to Reziniano's trip and suggested that he could obtain medical attention while in San Francisco. Reziniano, however, continued to refuse to come to the United States to testify at Yida's retrial.

On July 5, 2006, the government filed a motion in limine seeking to admit Reziniano's testimony from Yida's first trial pursuant to Federal Rule of Evidence 804(b)(1), arguing that Reziniano was unavailable under 804(a)(5) and 804(a)(4). After supplemental briefing and oral argument, the district court, in a well-reasoned memorandum and order, denied the government's motion in limine. *See United States v. Yida*, No. CR 00-00274, 2006 WL 1980390 (N.D.Cal. July 13, 2006).

The district court explained that the dispositive issue "is not whether the Government's efforts to convince a since-deported witness to return to testify were reasonable" but instead "whether the Government's decision to permit Reziniano to be deported in the *first place*, while in the custody of the Government, was a 'reasonable means' to 'procure the declarant's testimony.'" (citing Fed.R.Evid. 804(a)(5)) (footnote omitted) (emphasis in original). After distinguishing our decisions in *United States v. Winn*, 767 F.2d 527 (9th Cir.1985) (per curiam), and *United States v. Olafson*, 213 F.3d 435 (9th Cir.2000), the district court considered extra-circuit authority and adopted the First Circuit's application of a reasonable means inquiry to the government's efforts to preserve the presence of a witness within its jurisdiction before, as well as after, the witness was deported. *See United States v. Mann*, 590 F.2d 361 (1st Cir.1978). Although the district court found that the government had acted in good faith when it allowed Reziniano to be deported, it did not conclude that the government had acted reasonably. Accordingly, the district court held that Reziniano's testimony could not be admitted under either Rule 804(a)(4) or 804(a)(5)'s hearsay exceptions because he was not an "unavailable" witness.

On July 14, 2006, the government filed this expedited appeal pursuant to 18 U.S.C. § 3731.

II

[1] "Although we generally review evidentiary determinations involving an application of the Federal Rules of Evidence for an abuse of discretion, we review de novo the district court's interpretation of those rules." *United States v. Norris*, 428 F.3d 907, 913 (9th Cir.2005) (quoting *United States v. Sioux*, 362 F.3d 1241, 1244 n. 5 (9th Cir.2004)). Thus, we review whether the district court correctly construed the hearsay rule, which is a question of law, de novo and the district court's decision not to admit evidence under a hearsay exception for abuse of discretion. *Olafson*, 213 F.3d at 441.

III

***** SECTION OF OPINION OMITTED *****

Underlying both the constitutional principles and the rules of evidence is a preference for live testimony. Live testimony gives the jury (or other trier of fact) the opportunity to observe the demeanor of the witness while testifying. William Blackstone long ago recognized this virtue of the right to confrontation, stressing that through live testimony, “and this [procedure] only, the persons who are to decide upon the evidence have an opportunity of observing the quality, age, education, understanding, behavior, and inclinations of the witness.”³ William Blackstone, *Commentaries on the Laws of England* 373-74 (1768). Transcripts of a witness's prior testimony, even when subject to prior cross-examination, do not offer any such advantage, because “all persons must appear alike, when their [testimony] is reduced to writing.” *Id.* at 374. As the National Association of Criminal Defense Lawyers (“NACDL”) amicus brief highlights, the superiority of live testimony as contrasted with a transcript of prior testimony has been equally praised in our own judicial system since its inception. *See, e.g., Mattox v. United States*, 156 U.S. 237, 242-43, 15 S.Ct. 337, 39 L.Ed. 409 (1895) (“The primary object of the constitutional provision in question was to prevent depositions⁹⁵¹ ... being used against the prisoner in lieu of a personal examination and cross-examination of the witness, in which the accused has an opportunity, not only of testing the recollection and sifting the conscience of the witness, but of compelling him to stand face to face with the jury in order that they may look at him, and judge by his demeanor upon the stand and the manner in which he gives his testimony whether he is worthy of belief.”); *see also NLRB v. Universal Camera Corp.*, 190 F.2d 429, 430 (2d Cir.1951) (“[T]hat part of the evidence which the printed words do not preserve is the most telling part, for on the issue of veracity the bearing and delivery of a witness will usually be the dominating factors....”); *Broad. Music, Inc. v. Havana Madrid Rest. Corp.*, 175 F.2d 77, 80 (2d Cir.1949) (“The liar's story may seem uncontradicted to one who merely reads it, yet it may be contradicted ... by his manner ... which cold print does not preserve.”) (internal quotations omitted).

More recently, the United States Court of Appeals for the Third Circuit voiced the importance of observing, first hand, a witness's demeanor while testifying:

Demeanor is of the utmost importance in the determination of the credibility of a witness. The innumerable telltale indications which fall from a witness during the course of his examination are often much more of an indication to judge or jury of his credibility and the reliability of his evidence than is the literal meaning of his words. Even beyond the precise words themselves lies the unexpressed indication of his alignment with one side or the other in the trial. It is indeed rarely that a cross-examiner succeeds in compelling a witness to retract testimony which is harmful to his client, but it is not infrequently that he leads a hostile witness to reveal by his demeanor-his tone of voice, the evidence of fear which grips him at the height of cross-examination, or even his defiance-that his evidence is not to be accepted as true, either because of partiality or overzealousness or inaccuracy, as well as outright untruthfulness. The demeanor of a witness, as Judge Frank said, is ‘wordless language.’

Aquino, 378 F.2d at 548 (quoting *Broad. Music*, 175 F.2d at 80).

Professor Richard D. Friedman of the University of Michigan Law School, in his amicus brief, offers additional reasons for the courts' preference for live testimony, which we find persuasive. First, since “[w]itnesses who testify live at the current trial speak as of the current time,” while witness testimony via “transcript speaks as of the time of the prior proceeding, and cannot be updated” the accused can only use recently acquired information in cross-examining a witness if that testimony is live. The ability to cross-examine a witness at trial using the most current investigative information available cuts to the heart of the Sixth Amendment's confrontation clause. Second, witnesses who testify at both proceedings may expose inconsistencies between the two versions of their testimony, that can be exploited by the adverse party during cross-examination at the second proceeding, but witnesses whose prior testimony is introduced through a transcript at the current trial do not. Again, the core of the accused's right to confront the witnesses against him is implicated. Finally, allowing the prosecution to present a transcript, rather than live testimony, may lead to the presentation of that transcript when live testimony is vulnerable for the prosecution's case.^{FN8}

***** FOOTNOTE OMITTED *****

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Supreme Court of the United States
UNITED STATES, Petitioner,
v.
Cuauhtemoc GONZALEZ–LOPEZ.

No. 05–352.
Argued April 18, 2006.
Decided June 26, 2006.

Justice SCALIA delivered the opinion of the Court.

***142** We must decide whether a trial court's erroneous deprivation of a criminal defendant's choice of counsel entitles him to a reversal of his conviction.

I

Respondent Cuauhtemoc Gonzalez–Lopez was charged in the Eastern District of Missouri with conspiracy to distribute more than 100 kilograms of marijuana. His family hired attorney John Fahle to represent him. After the arraignment, respondent called a California attorney, Joseph Low, to discuss whether Low would represent him, either in addition to or instead of Fahle. Low flew from California to meet with respondent, who hired him.

Some time later, Low and Fahle represented respondent at an evidentiary hearing before a Magistrate Judge. The Magistrate Judge accepted Low's provisional entry of appearance and permitted Low to participate in the hearing on the condition that he immediately file a motion for admission *pro hac vice*. During the hearing, however, the Magistrate Judge revoked the provisional acceptance on the ground that, by passing notes to Fahle, Low had violated a court rule restricting the cross-examination of a witness to one counsel.

The following week, respondent informed Fahle that he wanted Low to be his only attorney. Low then filed an application for admission *pro hac vice*. The District Court denied his application without comment. A month later, Low filed a second application, which the District Court again denied without explanation. Low's appeal, in the form of an application for a writ of mandamus, was dismissed by the United States Court of Appeals for the Eighth Circuit.

Fahle filed a motion to withdraw as counsel and for a show-cause hearing to consider sanctions against Low. Fahle asserted that, by contacting respondent while respondent was represented by Fahle, Low violated Mo. Rule ***143** of Professional Conduct 4–4.2 (2003), which prohibits a lawyer “[i]n representing a client” from “communicat[ing] about the subject of the representation with a party ... represented by another lawyer” without that lawyer's consent. Low filed a motion to strike Fahle's motion. The District Court granted Fahle's motion to withdraw and granted a continuance so that respondent could find new representation. Respondent retained a local attorney, Karl Dickhaus, for the trial. The District Court then denied Low's motion to strike and, for the first time, explained that it had denied Low's motions for admission *pro hac vice* primarily because, in a separate case before it, Low had violated Rule 4–4.2 by communicating with a represented party.

The case proceeded to trial, and Dickhaus represented respondent. Low again moved for admission and was again denied. The court also denied Dickhaus's request to have Low at counsel table with him and ordered Low to sit in the audience and to have no contact with Dickhaus during the proceedings. To enforce the court's order, a United States Marshal sat between Low and Dickhaus at trial. Respondent was unable to meet with Low throughout the trial, except for once on the last night. The jury found respondent guilty.

After trial, the District Court granted Fahle's motion for sanctions against Low. It read Rule 4–4.2 to forbid Low's contact with respondent without Fahle's permission. ****2561** It also reiterated that it had denied Low's motions for admission on the ground that Low had violated the same Rule in a separate matter.

Respondent appealed, and the Eighth Circuit vacated the conviction. 399 F.3d 924 (C.A.8 2005). The court first held that the District Court erred in interpreting Rule 4–4.2 to prohibit Low's conduct both in this case and in the separate matter on which the District Court based its denials of his admission motions. The District Court's denials of these motions were therefore erroneous and violated respondent's *144 Sixth Amendment right to paid counsel of his choosing. See *id.*, at 928–932. The court then concluded that this Sixth Amendment violation was not subject to harmless-error review. See *id.*, at 932–935. We granted certiorari. 546 U.S. 1085, 126 S.Ct. 979, 163 L.Ed.2d 722 (2006).

II

[1][2] The Sixth Amendment provides that “[i]n all criminal prosecutions, the accused shall enjoy the right ... to have the Assistance of Counsel for his defence.” We have previously held that an element of this right is the right of a defendant who does not require appointed counsel to choose who will represent him. See *Wheat v. United States*, 486 U.S. 153, 159, 108 S.Ct. 1692, 100 L.Ed.2d 140 (1988). Cf. *Powell v. Alabama*, 287 U.S. 45, 53, 53 S.Ct. 55, 77 L.Ed. 158 (1932) (“It is hardly necessary to say that, the right to counsel being conceded, a defendant should be afforded a fair opportunity to secure counsel of his own choice”). The Government here agrees, as it has previously, that “the Sixth Amendment guarantees a defendant the right to be represented by an otherwise qualified attorney whom that defendant can afford to hire, or who is willing to represent the defendant even though he is without funds.” *Caplin & Drysdale, Chartered v. United States*, 491 U.S. 617, 624–625, 109 S.Ct. 2646, 105 L.Ed.2d 528 (1989). To be sure, the right to counsel of choice “is circumscribed in several important respects.” *Wheat, supra*, at 159, 108 S.Ct. 1692. But the Government does not dispute the Eighth Circuit's conclusion in this case that the District Court erroneously deprived respondent of his counsel of choice.

[3] The Government contends, however, that the Sixth Amendment violation is not “complete” unless the defendant can show that substitute counsel was ineffective within the meaning of *Strickland v. Washington*, 466 U.S. 668, 691–696, 104 S.Ct. 2052, 80 L.Ed.2d 674 (1984)—*i.e.*, that substitute counsel's performance was deficient and the defendant was prejudiced by it. In the alternative, the Government contends that the defendant must at least demonstrate that his counsel of choice would have pursued a different strategy that would have created a “reasonable*145 probability that ... the result of the proceedings would have been different,” *id.*, at 694, 104 S.Ct. 2052—in other words, that he was prejudiced within the meaning of *Strickland* by the denial of his counsel of choice even if substitute counsel's performance was not constitutionally deficient.^{FN1} **2562 To support these propositions, the Government points to our prior cases, which note that the right to counsel “has been accorded ... not for its own sake, but because of the effect it has on the ability of the accused to receive a fair trial.” *Mickens v. Taylor*, 535 U.S. 162, 166, 122 S.Ct. 1237, 152 L.Ed.2d 291 (2002) (internal quotation marks omitted). A trial is not unfair and thus the Sixth Amendment is not violated, the Government reasons, unless a defendant has been prejudiced.

FN1. The dissent proposes yet a third standard—*viz.*, that the defendant must show “ ‘an identifiable difference in the quality of representation between the disqualified counsel and the attorney who represents the defendant at trial.’ ” *Post*, at 2568 (opinion of ALITO, J.). That proposal suffers from the same infirmities (outlined later in text) that beset the Government's positions. In addition, however, it greatly impairs the clarity of the law. How is a lower-court judge to know what an “identifiable difference” consists of? Whereas the Government at least appeals to *Strickland* and the case law under it, the most the dissent can claim by way of precedential support for its rule is that it is “consistent with” cases that never discussed the issue of prejudice. *Post*, at 2568.

Stated as broadly as this, the Government's argument in effect reads the Sixth Amendment as a more detailed version of the Due Process Clause—and then proceeds to give no effect to the details. It is true enough that the purpose of the rights set forth in that Amendment is to ensure a fair trial; but it does not follow that the rights can be disregarded so long as the trial is, on the whole, fair. What the Government urges upon us here is what was urged upon us (successfully, at one time, see *Ohio v. Roberts*, 448 U.S. 56, 100 S.Ct. 2531, 65 L.Ed.2d 597 (1980)) with regard to the Sixth Amendment's right of confrontation—a line of reasoning that “abstracts from the right to its purposes, and then eliminates the right.” *Maryland v. Craig*, 497 U.S. 836, 862, 110 S.Ct. 3157, 111 L.Ed.2d 666 (1990) (SCALIA, J., dissenting). *146 Since, it was argued, the purpose of the Confrontation Clause was to ensure the reliability of evidence, so long as the testimonial hearsay bore “indicia of reliability,” the Confrontation Clause was not violated. See *Roberts, supra*, at 65–66, 100 S.Ct. 2531. We rejected that argument (and our prior cases that

had accepted it) in *Crawford v. Washington*, 541 U.S. 36, 124 S.Ct. 1354, 158 L.Ed.2d 177 (2004), saying that the Confrontation Clause “commands, not that evidence be reliable, but that reliability be assessed in a particular manner: by testing in the crucible of cross-examination.” *Id.*, at 61, 124 S.Ct. 1354.

[4] So also with the Sixth Amendment right to counsel of choice. It commands, not that a trial be fair, but that a particular guarantee of fairness be provided—to wit, that the accused be defended by the counsel he believes to be best. “The Constitution guarantees a fair trial through the Due Process Clauses, but it defines the basic elements of a fair trial largely through the several provisions of the Sixth Amendment, including the Counsel Clause.” *Strickland, supra*, at 684–685, 104 S.Ct. 2052. In sum, the right at stake here is the right to counsel of choice, not the right to a fair trial; and that right was violated because the deprivation of counsel was erroneous. No additional showing of prejudice is required to make the violation “complete.”^{FN2}

FN2. The dissent resists giving effect to our cases' recognition, and the Government's concession, that a defendant has a right to be defended by counsel of his choosing. It argues that because the Sixth Amendment guarantees the right to the “assistance of counsel,” it is not violated unless “the erroneous disqualification of a defendant's counsel of choice ... impair[s] the assistance that a defendant receives at trial.” *Post*, at 2566. But if our cases (and the Government's concession) mean anything, it is that the Sixth Amendment is violated when the erroneous disqualification of counsel “impair[s] the assistance that a defendant receives at trial [from the counsel that he chose].”

***** REMAINDER OF OPINION OMITTED *****

Articles

***475 CHEATING THE CONSTITUTION**

Pamela R. Metzger [FN1]

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***476 I. Introduction**

It is constitutional black letter law. To obtain a criminal conviction, the prosecution must prove every element of the offense, by proof beyond a reasonable doubt. The Constitution entitles a defendant to confront and cross-examine all witnesses against him. Yet, for the past thirty years, state legislatures have quietly approved laws that cheat the Constitution. These laws fly, undetected, beneath the constitutional radar, violating fundamental constitutional rights.

Although other constitutional cheats abound, this Article examines one archetypical example of constitutional cheating: statutes that permit state prosecutors to use hearsay state crime laboratory reports, in lieu of live witness testimony, to prove essential elements of a criminal case. [FN1] This Article characterizes these statutes as forensic ipse dixit statutes, because the bare assertion of an uncross-examined state witness becomes, ipse dixit, an adjudicated fact. [FN2] The forensic ipse dixit statutes deprive defendants of the right to confrontation and relieve the government of its burden of proof. These statutes also discourage vigorous defense advocacy, promote carelessness and fraud in crime laboratories, and increase the likelihood of wrongful convictions and sentences.

Part II of this Article provides an overview of the nationwide forensic ipse dixit phenomenon. Part III addresses the unwarranted presumption of reliability that legislatures and courts often accord to forensic reports. Parts IV and V, respectively, discuss how the forensic ipse dixit statutes violate the Confrontation and Due Process clauses of the United States Constitution. Part VI offers observations about what constitutional cheating reveals about our criminal justice system.

Of course, there is also a story:

In December of 2002, an audit disclosed major discrepancies in the forensic outcomes alleged by the Houston Police Department's ***477** crime laboratory ("HPD"). [FN3] Events in Texas soon snowballed, disclosing widespread incompetence, carelessness, and fraud in laboratories across the state. [FN4]

Nevertheless, in April of 2003, without public fanfare, a Texas state senator proposed a forensic ipse dixit statute that would permit prosecutors to substitute state crime laboratory certificates for live testimony. The certificate would prove both the chain of custody for the tested substance and the truth of the state laboratory's conclusions, without requiring a state crime examiner to even appear in court for confrontation or cross-examination. [FN5]

The Texas crime laboratory scandal continued to grow. The Houston District Attorney's office explicitly acknowledged the HPD's unreliability. The office refused to prosecute the hundreds of HPD-tested drug cases pending on its docket unless an independent and accredited crime laboratory conducted the forensic analysis. [FN6] In August of 2003, Texas's Department of Public Safety closed the HPD toxicology division. [FN7] Shortly thereafter, the FBI announced that it would no longer accept forensic testing reports from Texas laboratories.

Nevertheless, in September of 2003, the Texas forensic ipse dixit statute became law; the State is now permitted

to prove its crime laboratory's forensic conclusions without ever calling a laboratory witness to testify and undergo cross-examination. [FN8] Instead, an unsworn laboratory report establishes the truth of the forensic report.

This forensic ipse dixit statute is not an absurd anomaly of Texas law. Nearly every state in the union has enacted a version of this forensic ipse dixit statute.

***478** II. The Forensic Ipse Dixit Phenomenon

The vast majority of jurisdictions in the United States authorize the state to prove its forensic allegations by relying upon a forensic certificate in lieu of live testimony. [FN9] Only six jurisdictions have no forensic ipse dixit statute. [FN10] Sixteen states make a forensic certificate proof of its forensic conclusions about matters more ***479** scientifically complex and controversial than the correct identification and weight of a controlled substance. [FN11] Forensic ipse dixit certificates can prove the results of DNA tests, microscopic hair analyses, fingerprint identifications, coroners' reports, ballistics tests, and a wide range of other tests conducted by a crime laboratory. [FN12] When properly invoked, these statutes enable the prosecution to prove, through a hearsay forensic report, both the chain of custody and the "truth" of the forensic tester's conclusions. [FN13]

Nationally, the forensic ipse dixit statutes share certain structural characteristics. Once the prosecution provides any notice required by the statute, the burden shifts to defense counsel to demand that the prosecution honor its constitutional obligation of calling witnesses to prove each element of the offense by proof beyond a reasonable doubt.

If all goes well for the prosecution, the State's forensic proof process looks like this:

- At the request of a prosecutor or law enforcement officer, a State laboratory (or a laboratory retained by the State) conducts one or more forensic tests;
- The laboratory prepares a report reflecting its forensic conclusions;
- *480** • That report conforms, in form and in substance, to the requirements of the relevant state statute;
- The State complies with any applicable pretrial notice requirements;
- At trial, the State introduces the hearsay report;
- The report proves the chain of custody for the evidence tested;
- The report proves the truth of the laboratory's forensic conclusions;
- No State witness ever testifies about the testing methodology, the testing equipment, or the error rates associated with the testing;
- No State witness ever testifies about the tester's experience, education, or work performance;
- The hearsay forensic report creates, either de facto or de jure, a presumption that the State has proved, beyond a reasonable doubt, the truth of the report's conclusions.

The desire for cheaper and quicker criminal trials drives the forensic ipse dixit phenomenon. [FN14] Almost universally, legislators, prosecutors, and courts offer the same justifications for the forensic ipse dixit procedure: the purported reliability of forensic tests; [FN15] the infrequency of defense challenges to forensic conclusions; [FN16] and the financial costs of requiring forensic examiners to appear in court. [FN17] True, governors, prosecutors, and courts now routinely acknowledge wrongful convictions that are based on faulty science or perjured ***481** forensic testimony. Nevertheless, state legislatures continue to authorize constitutional cheating in order to reduce the costs

of adversarial criminal litigation. [FN18]

The forensic ipse dixit statutes share more than a common goal of quicker and cheaper criminal convictions; they also share common cheating tactics. They create “default waivers” of fundamental constitutional rights. In turn, those “waivers” convert the State’s partisan allegations into incontrovertible and unconstitutional presumptions.

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III. Challenging the Myth of Reliability

The legal community now concedes, with varying degrees of urgency, that our system produces erroneous convictions based on discredited forensics. [FN63] The renowned Innocence Project of Cardozo Law School has demonstrated that forensic fraud, forensic error, and “bad science” were significant factors in the first seventy wrongful *492 convictions that were reversed when the Innocence Project used DNA to exonerate those innocent persons. [FN64]

Possible sources of error abound. The scientific methodology may be unsound. The testing equipment may malfunction. The testing specimen may be contaminated, either deliberately or inadvertently. The chain of custody may be broken, so that substances are linked to the wrong defendants. The tester may err in conducting the forensic examination or in interpreting the test results. Clerical errors may occur in the transcription and recording of forensic test results, and tester dishonesty may produce deliberate misrepresentation of test results. Yet, the purported reliability of state forensic testing has long been used as a justification for the forensic ipse dixit legislation. [FN65]

Two core assumptions lead legislatures and courts to treat state forensic laboratory evidence as reliable. Others have written eloquently and with great scientific precision about the vices of these assumptions as applied to specific types of forensic testing. [FN66] However, *493 in order to contextualize the concept of constitutional cheating, this Article briefly discusses why these assumptions are unwarranted.

Common human experiences remind us that “science” changes with human progress. Scientific analyses are not static and neither are the substances, both legal and illegal, that laboratories are asked to test. For example, during the 1970s and 1980s the standard forensic tests for determining the identity of a controlled substance were the “color test” and the “crystal test” . Both were routinely used by forensic analysts, and the forensic results were routinely cited as proof that a tested specimen contained a controlled substance. As drug testing science evolved, however, it became clear that the color and crystal tests produced an unacceptably high number of false positives. [FN67]

State forensic examiners then turned to thin layer and gas liquid chromatography. [FN68] However, these methods also proved undesirable and are now considered unacceptably prone to operator error in both test performance and data interpretation. [FN69] In early 2005, infrared and mass spectrometry are the favored diagnostic methods among knowledgeable analysts. [FN70] Even spectrometry, however, can be unreliable as street drug technology outstrips laboratory testing knowledge and legislative prohibitions. When used to analyze street drugs on the street market, the spectrometry methodology can only identify those drugs that are 90 to 95 percent pure. [FN71] Since most street drugs are cut with substances that increase *494 the drug’s volume and decrease the drug’s purity, this poses a significant and ongoing obstacle to accurate forensic identification. [FN72]

Moreover, laboratory error and operator error exist even with the most well-established or unassailable scientific method. [FN73] Many courts naïvely assume that laboratory workers are professionals with a great deal of training and little motive to falsify their reports. [FN74] To the contrary, forensic accuracy is limited by “the limitations of the technician.” [FN75] Untold numbers of laboratory workers do not have any professional training in the science or technology that they use. [FN76] According to the American Society of Crime Laboratory Directors, of the 400-500 laboratories conducting forensic examinations for criminal trials, only 283 are accredited. [FN77]

Moreover, laboratory employees who prepare forensic ipse dixit certifications often lack the education or

experience that would be necessary for them to testify, as experts, about the scientific results they have certified. [FN78] If these testers cannot accurately read and report the forensic data, their truthfulness is irrelevant. The results *495 are disastrous. [FN79] For example, in Baltimore, Maryland, 480 criminal convictions had to be reexamined when investigators discovered that crime laboratory chemist, Concepcion Bacasnot, “did not understand the science of her forensic tests,” and therefore produced serology results that were sometimes “worthless.” [FN80] Similarly, an audit in Arizona showed that technicians at the Phoenix Crime Lab used incorrect mathematical computations in calculating the likelihood that DNA samples matched the charged defendants. [FN81]

No one should assume that these errors plague only some states, or that particular laboratories or particular law enforcement agencies produce presumptively reliable forensic results. The Federal Bureau of Investigation often analyzes evidence that has been gathered and stored by state crime laboratories. The accuracy of FBI testing therefore depends, in part, upon state quality control procedures. When the collecting laboratory contaminates samples or fails to accurately identify and store testing samples, the subsequent forensic inquiry lacks scientific integrity. [FN82] Although recent examples of this type of “link in the chain” forensic error abound, the most startling have been observed in Texas. Because of gross state laboratory failures, the FBI no longer collects database DNA samples from forensic laboratories in Dallas, Fort Worth, or Houston. [FN83]

Failures to follow laboratory protocol cause other forensic errors. Even knowledgeable laboratory workers sometimes engage in sloppy laboratory work or cut corners on important confirmatory tests. For example, in Florida, a routine quality assurance check caught a laboratory technician falsifying DNA evidence rather than performing confirmation tests. [FN84] Police and prosecutors may also pressure *496 laboratory workers to produce quick results. The pressure may discourage full compliance with laboratory protocol, leading to shoddy performance and inaccurate results. [FN85]

Ignorance, error, and laziness are not the only reason that laboratory results may lack reliability. Bias plays an important role. Conscious or subconscious tester bias may slant the interpretation and conclusion drawn from a forensic test. While crime laboratory workers may be less personally invested in a case than are police investigators, laboratory workers may nevertheless have a similar pro-prosecution bias. [FN86] After all, they are either state employees or employees of a state contractor, working in a laboratory that exists “in large part to facilitate the investigation and prosecution of crimes.” [FN87] When state crime laboratory workers generate forensic reports they act “as an arm of the State in assisting it to prevail in litigation and secure a conviction of the defendant.” [FN88] These laboratory workers devote themselves almost exclusively to analysis of samples submitted by law enforcement. [FN89] “They inevitably become part of the effort to bring an offender to justice” and share a “viewpoint colored brightly with prosecutorial bias.” [FN90] Indeed, in many cases “forensic scientists have exaggerated positive results in favor of the prosecution and downplayed negative results.” [FN91]

Forensic examiners are also keenly aware that police investigators have hand-picked the particular samples and substances that the police want to have tested. The forensic team is, in turn, *497 likely to rely upon a confirmation bias that inclines them to affirm the hypothesis inherent in sample submission: the crime scene sample matches the “target” sample. [FN92] Thus, “the seeds for erroneous convictions are sown in the investigative stage.” [FN93] Convinced of their hypothesis about guilt and the correlative forensic outcomes that would prove a defendant's guilt, “officers and prosecutors either don't realize the significance or accuracy of exculpatory evidence or on occasion affirmatively conceal it because they are convinced of the suspect's guilt.” [FN94] This phenomenon increases the likelihood that an examiner will only observe inculpatory results. [FN95] When investigators drop hints about the nature of the sample or its forensic origins, the likelihood of an inculpatory conclusion again increases. [FN96] The submission of a sample is often itself a message from the investigator to the examiner, which may influence the conclusions of even the most honest examiner. [FN97] Some laboratories even permit investigators to communicate directly with forensic workers, informing them of the investigator's hypothesis about the crime. [FN98]

Prosecutors also play a part in biasing forensic outcomes. A recent study commissioned by the Federal Bureau of Investigation noted that prosecutors sometimes pressure examiners to “push the envelope” in assessing and reporting test results. [FN99] Laboratory *498 workers respond by producing accordingly. False-positive matches are “classic error[s] that [reflect] a bias on the part of the analyst wanting to make a match.” [FN100]

Even the laboratory report itself may contribute to inaccurate case outcomes. Laboratory reports are often

deceptively straightforward. This type of evidentiary simplification seems to require “a measure of falsification.” [FN101] Nowhere is this more true than in the simplification of scientific conclusions.

First, testing outcomes are often less straightforward than the forensic conclusions advanced in the laboratory report. Squeezing forensic science into a criminal trial framework encourages examiners to reduce a complex forensic outcome into a “yes or no” answer to a forensic question. [FN102] Regardless of the declarant's intent, a report that provides forensic “outcomes” may well exaggerate forensic reliability or conceal forensic ambiguities. [FN103] For example, in 2004, at the FBI's request, the prestigious National Research Council reviewed the scientific evidence used in criminal cases involving ballistics. The report concluded that experts sometimes exaggerated the scientific reliability and relevance of their test results. [FN104] For instance, although “[d]etailed patterns of the distribution of ammunition are unknown,” experts often drafted laboratory reports indicating that they had “matched” ammunition found at the crime scene to ammunition connected to the defendant. [FN105]

***499** Slanted reports are not the worst examples of abuses by forensic examiners. The case of West Virginia State Trooper Fred Zain illustrates how state crime laboratory workers can, and do, engage in long-term, systematic, and deliberate falsification of evidence in criminal cases. [FN106] From 1979 to 1989, Zain worked as a forensic serologist in the West Virginia Department of Public Safety. In 1990, Zain became the chief of physical evidence for the medical examiner in Bexar County, Texas.

During his tenure as serologist for the West Virginia State Police, Zain performed, and drafted reports on, over one hundred forensic tests. [FN107] He also disregarded laboratory procedures, altered laboratory records, and deliberately misreported testing outcomes. [FN108] Because Zain's testing results and his expert courtroom testimony were often “scientifically inaccurate, invalid, or false,” [FN109] a specially-appointed habeas court concluded that, “as a matter of law, any testimonial or documentary evidence offered by Zain at any time in any criminal prosecution should be deemed invalid, unreliable, and inadmissible.” [FN110]

There is little reason to view Zain's downfall as evidence that “the system is working” in rooting out careless, lazy, and dishonest laboratory workers. Deficient laboratory procedures “undoubtedly contribut[ed] to an environment in which Zain's misconduct escaped detection.” [FN111] Those types of deficiencies make all forensic outcomes fair game for adversarial inquiry. [FN112] Institutional management ***500** failures, like those of Zain's supervisors, who “may have ignored or concealed complaints of his misconduct,” produce institutional outcome failures. [FN113] Thus, Zain, and others like him, may represent the tip of the forensic inaccuracy iceberg.

IV. Confrontation

The forensic ipse dixit statutes swindle defendants out of the Confrontation Clause's “bedrock procedural guarantee.” [FN114] As discussed supra, for nearly thirty years, state legislatures have routinely stacked the deck, dealing the state a hand that virtually guarantees the admission of untested forensic reports. The justification has been reliability; the goal has been systemic economy. Despite the prosecution of thousands upon thousands of cases in which the state has had the advantage of presenting forensic hearsay, few defendants have successfully challenged the deprivation of the confrontation right.

Crawford v. Washington may have forced courts to reexamine this constitutional legerdemain. After all, confrontation is “an essential and fundamental requirement for the kind of fair trial which is this country's constitutional goal.” [FN115] But, even as some courts strike down forensic ipse dixit statutes, legislatures and prosecutors promote new versions of the constitutional con game. [FN116]

This Part reviews the central premise of the Supreme Court's Confrontation Clause jurisprudence and the analysis that courts must perform under the Crawford decision. Straight-forward application of Crawford demonstrates that the forensic ipse dixit statutes are unconstitutional. [FN117]

***501** Practitioners and academics generally agree that the primary goal of the Confrontation Clause is to ensure the reliability of evidence. The procedural means to that substantive end are trial processes that permit the jury to watch accuser and accused face each other: the accuser makes her claims in the defendant's presence, and the

accused tests the accuser in the “crucible of cross-examination.” [FN118]

Each aspect of this procedure advances the search for reliability. First, the witness “stand[s] face to face with the jury in order that they may look at him, and judge by his demeanor upon the stand and the manner in which he gives his testimony whether he is worthy of belief.” [FN119] Second, the cross-examination permits the defense to test the witness's recollection and to “sift [] the conscience of the witness.” [FN120] Witnessing cross-examination helps “the jury to unmask false accusers.” [FN121] Another, less frequently identified function of the Confrontation Clause is its deterrent effect upon falsification of records and reports, and its corresponding encouragement of careful recordkeeping and documentation of evidence. [FN122] Measured against any of these functions, the forensic ipse dixit statutes fail to serve the constitutional goals of the Confrontation Clause.

In *Crawford*, the Supreme Court reaffirmed its commitment to an historical-functionalist view of the Confrontation Clause. [FN123] The Confrontation Clause must be interpreted in a manner that permits it to guard against the evils the Framers sought to avoid. [FN124] The Confrontation Clause thus seeks to eliminate the use of “ex parte examinations as evidence against the accused.” [FN125] Those ex parte and *502 unexamined modes of evidence are the principal evil that animated the Framers' enactment of the Confrontation Clause. [FN126]

Crawford stressed that the Confrontation Clause applies to all “ex parte in-court testimony or its functional equivalent--that is, material such as affidavits, custodial examinations, prior testimony that the defendant was unable to cross-examine”--that is offered to prove a fact at trial. [FN127] The Court noted that the “Framers would not have allowed admission of testimonial statements of a witness who did not appear at trial unless he was unavailable to testify, and the defendant had had a prior opportunity for cross-examination.” [FN128] Those same restrictions now protect modern-day criminal defendants. [FN129]

The *Crawford* decision changed the analytic structure of confrontation jurisprudence, reversing nearly twenty-five years of case law generated by *Ohio v. Roberts*. [FN130] *Ohio v. Roberts* “condition[ed] the admissibility of all hearsay evidence on whether it [fell] under a ‘firmly rooted hearsay exception’ or [bore] ‘particularized guarantees *503 of trustworthiness.’” [FN131] Under *Roberts*, “upon a mere finding of reliability” by the court, the State could prove its case using untested ex parte statements. [FN132] Under *Crawford*, the first step in assessing whether the Constitution permits the admission of an out-of-court statement is determining whether the statement is testimonial. [FN133] If the statement is testimonial, “the Sixth Amendment demands what the common law required.” [FN134] Either the declarant must testify (in which case the Confrontation Clause places no limit upon the introduction of the declarant's out-of-court statements), or the prosecution must prove that the witness is unavailable and that the defendant has had a prior opportunity for cross-examination. [FN135]

The *Crawford* Court left “for another day [the] effort to spell out a comprehensive definition of ‘testimonial.’” [FN136] However, the Court shed significant light on the matter by identifying the category of witnesses whose testimony must be cross-examined. First, the Court defined a “witness” as “one who bears testimony” against an accused. [FN137]

The Court then defined the requisite “testimony” as a “solemn declaration or affirmation made for the purpose of establishing or proving some fact.” [FN138] By way of example, the Court stated that an out-of-court statement is testimonial if the declarant reasonably expected that the statement would be used prosecutorially. [FN139]

*504 The Court provided a non-exhaustive list of testimonial statements. [FN140] Among those statements that are clearly testimonial are “extrajudicial statements” that are the “functional equivalent” of in-court testimony. [FN141] These include “formalized testimonial materials” such as affidavits, depositions, grand jury statements, preliminary hearing testimony, confessions, custodial examinations, and prior testimony. [FN142] “[S]imilar pretrial statements that declarant would reasonably expect to be used prosecutorially” are testimonial, as are statements “made under circumstances which would lead an objective witness reasonably to believe that the statement would be available for use at a later trial.” [FN143]

In this functional analysis of the confrontation guarantee, it is difficult to imagine statements that are more paradigmatically testimonial than forensic certifications by police laboratory workers. [FN144] Forensic affidavits

are “made under circumstances which would lead an objective witness reasonably to believe that the statement would be available for use at a later trial.” [FN145] Any objective (or marginally competent) crime lab employee knows that the results of forensic analysis will be available for use at a later trial. Indeed, most of the forensic ipse dixit statutes are specifically addressed to the criminal prosecutions. [FN146]

Crime laboratory reports are out-of-court statements designed to prove a fact (often an essential element) in a criminal case. Law enforcement gathers, tests, and reports on the sample, solely with the intent of using the test results in a criminal prosecution. Thus, the forensic ipse dixit reports exemplify the accusatory statements targeted by the Confrontation Clause, and admission of the reports is the admission of testimony produced by “government officers. . . with an eye toward trial.” [FN147] Presented at trial, these police crime laboratory reports have “unique potential for prosecutorial abuse--a *505 fact borne out time and again throughout a history with which the Framers were keenly familiar.” [FN148]

Under the Roberts and Crawford tests, however, courts have strained the bounds of logic in order to hold that admission of an ex parte forensic report does not violate the Confrontation Clause. The Supreme Court has long required that the government prove the declarant's unavailability as a prerequisite to the ex parte admission of certain out-of-court statements. Yet, there is a long-standing line of cases that illustrates the oft-employed judicial fiction that the unavailability requirement simply does not apply to state crime laboratory workers. [FN149] The assertion seems to be that the actual examiner would recall little about the particular chemical test at issue. [FN150] Accordingly, the argument goes, cross-examination of the actual examiner is not necessary. [FN151] This argument is bolstered by a volume-equals-accuracy argument: because the examiners perform so many tests, those tests are highly reliable. [FN152]

Nor can there be any meaningful claim that the forensic examiners are, in fact, unilaterally unavailable. The forensic witnesses are available; they simply do not want to travel to court, wait in court, testify in court, or return from court if the parties announce a last-minute stipulation. State budget crises and prospective laboratory efficiencies do not make the examiner unavailable. Moreover, while crowded court dockets move more smoothly when fewer witnesses testify, court dockets do not make witnesses unavailable. The “increased funding of the State Crime Lab” can enable laboratory employees “to fulfill their laboratorial duties as well as their duty to provide in-court expert testimony.” [FN153] The claim of unavailability is nothing more than a fraud.

*506 Setting aside the unavailability issue, pre- and post-Crawford, courts have used specious arguments to justify the forensic ipse dixit procedure. Prior to Crawford, courts articulated four basic justifications for permitting an ex parte accusation via the State's forensic report: the reliability of the report, the report's identity as a business record; the “legitimate” state interest in conserving laboratory resources; and the defendant's access to the forensic witness via his compulsory process right. [FN154] To the extent that, even after Crawford, courts still cling to these rationales, I discuss their post-Crawford use and viability.

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***518 V. Due Process**

One consistent feature of our constitutional criminal procedure system is its use of procedural rules to effectuate constitutional values. The forensic ipse dixit statutes are a perversion of this process; they use procedural rules to undermine constitutional values. As I explain below, the forensic ipse dixit gambit converts a partisan crime laboratory report into proof of an essential element, violating the reasonable doubt rule and cheating the Constitution.

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***528 VI. What The Forensic Ipse Dixit Phenomenon Reveals**

Why should we believe that constitutional cheats like the forensic ipse dixit statutes reveal something deeper

and more profound than a general distaste for expensive criminal trials and an often-correct assumption that the accused are guilty? Certainly we could try to understand the forensic ipse dixit phenomenon as a unique result of the war on drugs that has dragged other forensic issues along in its wake. This would be a serious error.

True, drug-war hysteria may have provided the impetus for the initial forensic ipse dixit rules. [FN275] However, the drug war alone cannot explain why state legislatures fight back by cheating the Constitution. Nor can the drug war explain the startling uniformity of the cheating methodology, or the jurisprudential gymnastics that rationalize the legality of these statutes. [FN276] Something deeper is afoot.

A. Assuming and Preferring Adversary Failure

The forensic ipse dixit procedures illustrate a fundamental legislative assumption of system failure. Lawmakers assume that the criminal justice system minimizes costs and maximizes efficiency when defense counsel must initiate adversary procedures by filing labor and fact-intensive claims of entitlement. [FN277] In deference to this assumption, legislators structure forensic proof rules to require that *529 the defense take affirmative steps to initiate the (resource-intensive) exercise of constitutional rights. [FN278]

To confirm that a presumption of defense failure undergirds the structure of the forensic cheating statutes, we need only consider the other possible procedures that legislatures might have enacted to conserve forensic resources. After all, there is no abstract, structural reason to assume that the ipse dixit statutes would best meet this cost-savings goal. Presume, for a moment, that we credit the legislative justification for these statutes: the testing is reliable and defense counsel rarely choose to challenge the crime laboratory witness. [FN279] Why, then, do legislators universally prefer forensic ipse dixit rules over other, less burdensome procedural structures? Had legislators simply intended to make forensic-based prosecutions cheaper, there are many ways to do so without bypassing the Constitution.

For example, a legislature might enact criminal codes that use simple, old-fashioned housekeeping to conserve forensic resources. Each regional courthouse could be required to have a regular schedule of days on which the judges would hear motions and sit at trials that require the appearance of forensic witnesses. This would enable state crime laboratory workers to consolidate their court appearances, thereby limiting the amount of time they spend out of the laboratory, traveling to court, and testifying. So long as this schedule does not create Sixth Amendment speedy trial issues, or violate state speedy trial provisions, the system would gain efficiency without sacrificing rules that promote accuracy and fairness.

Another method of gaining efficiency would be to rely upon stipulations. A statute that requires prosecutors to offer to stipulate to the crime laboratory report would, in theory, serve the same function as the ipse dixit statutes.

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B. Discouraging Public Discourse About Criminal Justice Policy

Constitutional cheating also has an important anti-democratic cost. When the legislature hides the cost of prosecution and bets on defense failures to maintain the cover, prosecutors avoid hard choices: resource-based decisions about which cases to prosecute. In turn, reducing the cost of prosecution helps legislators avoid difficult determinations about which conduct ought to be criminalized. *532 Instead, they simply legislate away some of the (constitutional) costs of prosecution.

Ordinarily, a state's decision to prosecute an offense necessarily implies its willingness to bear the associated costs of prosecution: "Governments, both state and federal, quite properly spend vast sums of money to establish machinery to try defendants accused of crimes." [FN284] A necessary corollary is that state funds will support the defendant in his effort to defend himself. [FN285] If states can not or will not bear the cost of providing expert testimony in all of the cases that prosecutors charge, let alone provide expert assistance to individual defendants, then prosecutors and legislators must reconsider how they wish to allocate their resources.

When legislatures, instead, cheat the Constitution to compensate for underfunding crime laboratories and public defenders, the subterfuge conceals the resource deficiency. This, in turn, stifles public debate about how the legislative and executive branches should allocate scarce resources.

Constitutional cheating not only disguises resource crises, but it breaks faith with the presumption of constitutional compliance. For example, the ipse dixit statutes help relieve prosecutors of their traditional obligation to exercise prosecutorial discretion within constitutional limits. Resource scarcity is one of the primary factors driving the exercise of prosecutorial discretion. Since prosecutors lack the time (and the motivation) to pursue, with equal vigor, all criminal violations, they routinely make policy decisions that prioritize a wide variety of goals. A prosecutor might decide to devote scarce prosecutorial and law enforcement resources to prosecuting child abusers instead of pot smokers. In the alternative, a prosecutor might choose to prosecute cases based on their prospective deterrent effect rather than upon their particular immorality. However, when constitutional cheating lessens resource constraints, providing prosecutors with a bargain-basement price for proving forensic elements, there is almost no incentive for prosecutors not to prosecute.

Prosecutorial discretion is checked by constitutional limits, legislative repeals, and electoral politics. If the public dislikes a prosecutor's choices, the public can vote the prosecutor out of office. [FN286] *533 If the legislature dislikes a prosecutor's choices, it can change the substantive or procedural laws in a way that restricts those prosecutorial choices. [FN287] And, if the prosecution dislikes legislative funding choices, the prosecution can lobby the legislature, or appeal to the public. Thus, constitutional cheating disguises resource scarcity, discourages careful weighing of charging consequences, and breaks faith with the presumption of public participation in prosecutorial policy choices.

These institutional resource allocation questions have traditionally been at the core of both our constitutional criminal procedure and of the Supreme Court's constitutional analysis. [FN288] Indeed, these are precisely the sorts of political and institutional checks and balances that should occur in the criminal justice system. Thus, the system as a whole suffers when legislatures legislate away constitutional protections in exchange for efficiency.

C. Promoting and Reinforcing Anti-Constitutional Practice Norms

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D. Limiting Institutional Opportunities to Proctor Constitutional Cheats

Constitutional cheating also illustrates our systemic overdependence upon individual defendants and their attorneys to proctor the criminal justice system. Our criminal justice system's error-protecting features “depend for their enforcement on an adequate level of litigation by defendants, meaning in practice by defense counsel.” [FN292] The criminal “defendant's rights are really the system's rules, rules that regulate the conduct of the various actors who take part in the process by which some criminal defendants are convicted and punished.” [FN293]

Structural aspects of our criminal justice system, however, limit the extent to which defense attorneys can actually enforce constitutional protections and proctor constitutional cheating. First, constitutional rules are almost impossible to enforce when, in the vast majority of cases, the accusation is resolved by guilty plea. However, in the 95 percent of cases that resolve by way of plea bargain, the ipse dixit statutes ensure that the parties bargain under the normative assumption that the defendant cannot meaningfully hope to challenge the State's forensic evidence.

Second, a fundamental tenet of the attorney-client relationship is that counsel acts on behalf of the individual client and not on behalf of future defendants or the system as whole. This results in both parties to a criminal case preferring an individual resolution rather than a litigated solution that affects the entire system.

When defense counsel catches the government cheating, her responsibility is to leverage the identification of that cheat into a positive outcome for her client. Prosecutors have an institutional obligation to be sure that one remarkable defense case does not create a litigated outcome that fundamentally alters procedural rules that affect a large class of defendants. Accordingly, prosecutors have a *536 strong incentive to forego litigation of

constitutional cheats in individual cases: the institutional costs associated with an adverse appellate ruling are simply too high. Smart prosecutors will agree to follow constitutional norms in a limited number of individual cases, rather than risk an appellate ruling that precludes all future use of the constitutional cheat at issue. [FN294] This reality reduces the likelihood that one attorney's identification and enforcement of a constitutional right will have a significant systemic enforcement effect. [FN295]

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***538 VII. Conclusion**

The forensic ipse dixit phenomenon reviewed in this Article represents far more than an unwarranted legislative confidence in the accuracy of science and its practice in state crime laboratories. Rather, the forensic ipse dixit phenomenon illustrates a dangerous game of constitutional smoke and mirrors. In the guise of resource conservation, lawmakers are chipping away at the procedural foundations of constitutional criminal procedure. State legislatures have created rules that help prosecutors cheat their way to quicker and cheaper convictions. Under-litigation and under-enforcement by defense attorneys and judges, respectively, prevents successful proctoring of the criminal process; accordingly, the constitutional cheating succeeds on a spectacular level. [FN307] In the wake of recent Supreme Court decisions like Crawford, we can hope that courts will vigorously enforce the Sixth Amendment guarantees that should serve as prophylactics against constitutional cheating and its consequences. Successful judicial proctoring of constitutional cheats, however, requires that litigants first deconstruct the rhetorical artifice that masks the statutory subterfuge. Like any other kind of cheating, constitutional cheating secretly flouts the rules and gives the cheater an unwarranted advantage over the game's other players. To date, the cheaters are winning. Whether the cheaters will succeed remains to be seen.

[FN1]. Associate Professor of Law, Tulane Law School. For their invaluable assistance, the author expresses thanks to her colleagues, Janet C. Hoeffel, Katherine Mattes, Keith Werhan, and Professor Darryl Brown. This Article would not have been possible without the committed research assistance of several law students, including Brandy Sheely, Meghan Garvey, Suzanne Cohen, and Laurent Demosthenidy. Special thanks are also due to Lynn Becnel, Denise Carroll, and Lisa Lamonte.

[FN1]. As discussed in Part II, this type of legislation governs forensic testing designed to “match” evidence to a particular individual and forensic testing designed to “identify” evidence as containing, in whole or in part, a particular chemical or physical substance. Particularly in controlled substance and DUI cases, the forensic proof-by-certificate statutes raise relatively straight-forward questions about reliability, confrontation, and the proof of elements.

[FN2]. Black's Law Dictionary 743 (7th ed. 1999).

[FN3]. See Mike Glenn, Auditors find problems with HPD's crime lab, Houston Chronicle, Jan. 23, 2003, at A19 (reporting results of an audit conducted by the Texas Department of Public Safety on the Houston Police Department's DNA and serology laboratory); see also Mike Glenn, House hearings on HPD crime lab to focus on audit, Houston Chronicle, Mar. 3, 2003, at A15 (discussing measures to be taken by the House Committee to investigate and resolve audit findings).

[FN4]. Id.

[FN5]. Criminal Jurisprudence Committee Report, Tex. Bill Analysis, 2003 Regular Sess., S.B. 1129.

[FN6]. Roma Khanna & Steve McVicker, ‘Trace’ drug cases on hold, Houston Chronicle, July 3, 2003, at A1.

[FN7]. See Glenn, Auditors find problems with HPD's crime lab, supra note 3 (reporting results of an audit conducted by the Texas Department of Public Safety on the Houston Police Department's DNA and serology laboratory).

[FN8]. Tex. Code Crim. Proc. Ann. art.38.41 (Vernon 2006). The statute excludes from its ambit latent fingerprint examinations and certain breath analyses related to DUI offenses.

***** FOOTNOTE OMITTED *****

[FN10]. The six states without forensic ipse dixit statutes are California, Georgia, Hawaii, Indiana, Illinois, and Mississippi. Two of those states, Illinois and Georgia, had forensic ipse dixit statutes that were repealed after their respective supreme courts found the procedure unconstitutional.

[FN11]. As discussed infra in Part III, correct identification of a controlled substance may itself be a complex scientific question.

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[FN13]. As discussed in Part V, in some jurisdictions the introduction of the hearsay forensic report requires the factfinder to assume the truth of the State's forensic conclusion.

[FN14]. See cases cited infra note 16.

[FN15]. See, e.g., State v. Hancock, 825 P.2d 648, 651 (Or. Ct. App. 1992) (explaining that Oregon enacted its forensic ipse dixit statute in part, because of the purported rarity of drug misidentification); State v. Hudson, 2002 WL 472304, at *3 (Ohio Ct. App. Mar. 28, 2002) (discussing the courts' long-standing assumption of the “trustworthiness” of crime laboratory analyses). As I explain in Part III, reliance on forensic testing is unwarranted. The potential for erroneous or fraudulent forensic reports underscores the serious threat these statutes pose to defendants' confrontation and due process rights.

[FN16]. See, e.g., State v. Cunningham, 903 So.2d 1110, 1120 (2005) (discussing high volume of Orleans Parish drug cases and analogizing to other jurisdictions in which fewer than 10% of litigants challenge the State's forensic evidence); Hancock, 825 P.2d at 651 (explaining that Oregon enacted its statute, in part, because defendants rarely challenge forensic analyses).

[FN17]. See, e.g., Cunningham, 903 So.2d at 1115-16 (explaining that the criminalist statute relieves litigants of “the burden” of calling forensic witnesses to the stand); Rice v. State, 597 A.2d 1001, 1005 (Md. Ct. Spec. App. 1991) (describing Maryland's criminalist statute as an “evidentiary shortcut” that will “accelerate the trial of cases” (citing Thompson v. State, 566 A.2d 126 (Md. Ct. Spec. App. 1989))); Miller v.

State, 472 S.E.2d 74, 76 (Ga. 1996) (stating the statute's purpose as "promot[ing] judicial economy"). For a discussion of the forensic proof ipse dixit phenomenon in Montana, see Nicholas J. Weilhammer, Face to Face: The Crime Lab Exception of Rule 803(8) of the Montana Rules of Evidence and the Montana Confrontation Clause, 60 Mont. L. Rev. 167, 173-99 (1999).

[FN18]. For example, as discussed supra in text accompanying notes 5-8, even as Texas closed several of its crime laboratories for gross scientific failures, the state legislature enacted a law that made government forensic analysis certificates admissible, without cross-examination, "to establish the results of a laboratory analysis... conducted by or for a law enforcement agency...." Tex. Code Crim. Proc. Ann. §38.41 (Vernon 2006).

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[FN63]. See, e.g., Edward Connors et al., U.S. Dep't of Justice, Convicted by Juries, Exonerated by Science: Case Studies in the Use of DNA Evidence to Establish Innocence After Trial 33-76 (1996) (discussing the first 28 DNA exonerations); Craig M. Cooley, Reforming the Forensic Science Community to Avert the Ultimate Injustice, 15 Stan. L. & Pol'y Rev. 381, 387-408 (2004) ("[T]he forensic science community is having difficulty establishing its competence and proficiency."); Paul C. Giannelli, The Abuse of Scientific Evidence in Criminal Cases: The Need for Independent Crime Laboratories, 4 Va. J. Soc. Pol'y & L. 439, 441-69 (1997) ("[M]ajor abuses in the use of scientific evidence have surfaced, including perjury by expert witnesses, faked laboratory reports, and testimony based on unproven techniques."); Innocence Project, <http://www.innocenceproject.org> (last visited Jan. 26, 2006) ("a non-profit legal clinic and criminal justice resource center... [which] work[s] to exonerate the wrongfully convicted through post-conviction DNA testing").

[FN64]. See Innocence Project, About the Innocence Project, <http://www.innocenceproject.org> (last visited Jan. 26, 2006) (discussing the use of DNA to exonerate innocent persons); see also Connors, supra note 63, at 33-76 (discussing the first 28 DNA exonerations); Jim Dwyer et al., Actual Innocence: Five Days to Execution and Other Dispatches from the Wrongly Convicted 244-52 (2000) ("Forensic scientists shade their conclusions or skip the tests altogether, to accommodate a presumption of guilt.")

[FN65]. See, e.g., *Sherman v. Scott*, 62 F.3d 136, 142 (5th Cir. 1995) ("cross-examination of the chemists who prepared the report would have been of little use"); *Minner v. Kerby*, 30 F.3d 1311, 1314-15 (10th Cir. 1994) (asserting that the laboratory notes were trustworthy because, inter alia, they "concern mechanically objective tests," "were taken contemporaneously with the performance of the tests," and the chemist appeared to have followed standard laboratory procedures); *United States v. Baker*, 855 F.2d 1353, 1360 (8th Cir. 1988), cert. denied, 490 U.S. 1069 (1989); *Reardon v. Manson*, 806 F.2d 39 (2d Cir. 1986), cert. denied, 481 U.S. 1020 (1987) (asserting that laboratory reports were sufficiently reliable to obviate need for cross-examination where the chemists analyzed thousands of compounds each year); *Brown v. United States*, 627 A.2d 499, 507 (D.C. 1993) (deeming the state-generated laboratory report "inherently reliable"); see also *State v. Hudson*, No. 79010, 2002 WL 472304, at *3 (Ohio Ct. App. Mar. 28, 2002) ("The trustworthiness of such analyses has long been recognized by the courts."); *State v. Hancock*, 825 P.2d 648, 651 (Or. Ct. App. 1992) (referring to legislative findings that "representatives from the Oregon State Police and the Oregon District Attorneys' Association testified that they could not recall any cases of drugs being misidentified by laboratory analysis," and that "the accuracy of the chemical analysis of an alleged controlled substance by the laboratory is almost never challenged"); *Howard v. United States*, 473 A.2d 835, 839 (D.C. 1984) ("[T]he fact sought to be established through admission of the DEA [chemist] reports, is determined by a well recognized chemical procedure. Thus, the reports contained objective facts rather than expressions of opinion."). But see *Hudson*, 2002 WL 472304, at *10 (Karpinski, J., dissenting) ("This last year, newspapers have reported instances across the nation of technicians falsifying chemical lab reports. How trustworthy is a report if the person who prepared it has [not]... testified under oath at a trial? A major test of reliability is that oath.")

[FN66]. See, e.g., Alfred Biasotti & John Murdock, *The Scientific Basis of Firearms and Toolmark Identification: Areas of Scientific Disagreement*, in 3 *Modern Scientific Evidence: The Law and Science of Expert Testimony* § 29-2.3 (David L. Faigman et al. eds., 2002); C. Michael Bowers, *Identification from Bitemarks: Proficiency Testing of Board Certified Odontologists*, in 3 *Modern Scientific Evidence: The Law and Science of Expert Testimony* §30-2.1.3 (David L. Faigman et al. eds., 2002); Tamara F. Lawson, *Can Fingerprints Lie?: Reweighing Fingerprint Evidence in Criminal Jury Trials*, 31 *Am. J. Crim. L.* 1, 37-48 (2003); Richard Lempert, *After the DNA Wars: Skirmishing with NRC II*, 37 *Jurimetrics J.* 439, 465-68 (1997) ("DNA evidence is routinely evaluated and presented in court in ways that risk substantially overstating its incriminating power."); Michael J. Saks, *The Legal and Scientific Evaluation of Forensic Science (Especially Fingerprint Expert Testimony)*, 33 *Seton Hall L. Rev.* 1167, 1170-86 (2003).

[FN67]. Some laboratories produced false positives in as many as 20 to 30 percent of the color and crystal tests they performed. Paul C. Giannelli & Edward J. Imwinkelried, 2 *Scientific Evidence* §23-2(B), at 355 (3d ed. 1999).

[FN68]. See James M. Shellow, *The End of a Confidence Game: A Possible Defense to the Impossible Drug Prosecution*, *The Champion*, Aug./Sept. 2000, at 22, 23. For an explanation of this testing methodology and an assessment of its associated error rate, see 2 David Bernheim, *Defense of Narcotics Cases* § 4.08 (2001).

[FN69]. Bernheim, supra note 68, §4.08[4]-[5].

[FN70]. Shellow, supra note 68, at 23-24. For a detailed explanation of these testing processes, see Bernheim, supra note 68, §4.13.

[FN71]. Giannelli & Imwinkelried, supra note 67, §23-3(A), at 390.

[FN72]. For example, the Wisconsin State Crime Laboratory has mistakenly identified anti-ulcer medication as heroin. Shellow, supra note 68, at 22, n.6 (citing XXVIII Microgram 2 (Jan. 1995)).

[FN73]. For example, in *California v. Trombetta*, 467 U.S. 479 (1984), the Supreme Court touted the reliability of the Intoxilyzer, stating that "[o]nce the Intoxilyzer indicate[s] that respondents were legally drunk, breath samples [preserved for retesting by the defendants are] much more likely to provide inculpatory than exculpatory evidence." *Id.* at 489. Yet the Court insisted that "as to operator error, the defendant retains the right to cross-examine the law enforcement officer who administered [the scientific test], and to attempt to raise doubts in the mind of the factfinder whether the test was properly administered." *Id.* at 490.

[FN74]. See, e.g., *United States v. Curtis*, 755 A.2d 1011, 1016 (D.C. 2000) (Drug Enforcement Agency "chemists who conduct such analyses do so routinely and generally do not have an interest in the outcome of trials. In fact, as employees and scientists, they are under a duty to make accurate reports. It is difficult to perceive any motive or opportunity for the chemists to falsify." (quoting *Howard v. United States*, 473 A.2d 835, 839 (D.C. 1984)) (quotations omitted).

[FN75]. Shellow, supra note 68, at 24.

[FN76]. One commentator has noted that "[w]e suffer from a shortage of truly competent experts and facilities and an equally important shortage of independent means to evaluate the competency of individuals and facilities. Too many individuals who testify in court offer their services purely as self-professed experts. [...] In spite of being a firm advocate of forensic science, I must acknowledge that a disturbingly high percentage of laboratories are not performing routine tests competently, as shown by our proficiency testing." Symposium on Science and the Rules of Legal Procedure, supra note 48, at 645 (quoting Professor Joseph Peterson).

[FN77]. For a list of ASCLD accredited labs, see American Society of Crime Laboratory Directors, Laboratory Accreditation Board, <http://www.asclcd-lab.org/legacy/asclcdlaboratories.html> (last visited Jan. 26, 2006).

[FN78]. See, e.g., Shellow, *supra* note 68, at 22 (“Few analysts have even a rudimentary understanding of the scientific method.”); accord David A. Stony, *A Medical Model for Criminalistics Education*, 33 *J. Forensic Sci.* 1086, 1088 (1988) (“What are the entry requirements [to forensic science]? Employment and function. One joins the profession when one is hired by a crime laboratory and when one begins to write reports and to testify in court.”).

[FN79]. William C. Thompson, *Review of DNA Evidence in State v. Josiah Sutton*, *Scientific Testimony*, Feb. 6, 2003, at 1-2, available at <http://www.scientific.org/archive/Thompson%20Report.PDF>.

[FN80]. Stephanie Hanes, *Chemist Quit Crime Lab Job After Hearing, Papers Show; She Acknowledged Report Was “Worthless” in 1987*, *Balt. Sun*, Mar. 19, 2003, at 1B.

[FN81]. See Carlos Miller, *Phoenix Police Lab Errs on DNA: 9 Cases Under Review After Mistakes Found*, *Arizona Republic*, May 6, 2003, at B1.

[FN82]. Obviously the failure to follow chain of custody procedures also renders evidence inaccurate or irrelevant.

[FN83]. The DNA department of the Houston Crime Laboratory was shut down indefinitely in December 2003 due to an internal audit that discovered “widespread problems with personnel, procedures and facilities.” Roma Khanna & Steve McVicker, *State Might Overhaul Crime Labs; Legislators Look at Oversight Panel, Regional Facilities*, *Houston Chronicle*, Feb. 20, 2005, at B1. “According to the audit, lab workers were insufficiently trained, did not follow standard scientific protocols and gave trial testimony based on questionable lab results.” Armando Villafranca, *Crime Lab Probe Looks Beyond Harris County; Evidence in 14 Outside Cases Was Tested at Houston Facility*, *Houston Chronicle*, April 16, 2003, at A27.

[FN84]. Rene Stutzman, *State DNA Analyst's Data Forgeries Could Result in New Trial for Rapist*, *Orlando Sentinel*, July 25, 2002, A1.

[FN85]. See Ruth Teichroeb, *Rare Look Inside State Crime Labs Reveals Recurring Problems: 23 Cases in 3 Years Had DNA Test Errors*, *Seattle Post-Intelligencer*, July 22, 2004, at A1. According to an internal investigation launched in response to revelations of laboratory negligence, analysts “rushed [their] work in order to satisfy police.” *Id.* The report noted that “[t]he quality of interpretations and data review should not be compromised under pressure from the submitting agencies to prematurely release results.” *Id.*

[FN86]. See D. Michael Risinger et al., *The Daubert/Kumho Implications of Observer Effects in Forensic Science: Hidden Problems of Expectation and Suggestion*, 90 *Cal. L. Rev.* 1, 19 (2002).

[FN87]. *State v. Williams*, 644 N.W. 2d 919, 931 (Wis. 2002). Many courts overlook this institutional loyalty when they evaluate the reliability of state laboratory reports. As discussed previously, the failure to treat laboratory workers as part of the prosecution team has led some courts and legislatures to treat state laboratory reports like business records or public records that are exempted from the usual hearsay rules. See *supra* note 65.

[FN88]. *Williams*, 644 N.W. 2d at 931.

[FN89]. Risinger et al., *supra* note 86, at 19 (quoting James E. Starrs, *The Ethical Obligations of the Forensic Scientist in the Criminal Justice System*, 54 *J. Ass'n Official Analytical Chemists* 906, 910 (1971)).

[FN90]. *Id.*

[FN91]. Myrna Raeder, *What Does Innocence Have To Do With It?: A Commentary on Wrongful Convictions and Rationality*, 2003 *Mich. St. L. Rev.* 1315, 1319 (citing D. Michael Risinger & Michael J. Saks, *Rationality, Research and Leviathan: Law Enforcement-Sponsored Research and the Criminal Process*, 2003 *Mich. St. L. Rev.* 1023, 1042).

[FN92]. Risinger et al., *supra* note 86, at 7 n.22 (citing Arthur S. Reber, *The Penguin Dictionary of Psychology* 151 (2d ed. 1995) (defining confirmation bias as “[t]he tendency to seek and interpret information that confirms existing beliefs”).

[FN93]. Raeder, *supra* note 91, at 1327.

[FN94]. *Id.* (citing Michael J. Saks & D. Michael Risinger, *Baserates, The Presumption of Guilt, Admissibility Rulings, and Erroneous Convictions*, 2003 *Mich. St. L. Rev.* 1051, 1056-57). Saks and Risinger argue for a requirement that investigators search for evidence that contradicts the guilt hypothesis.

[FN95]. Saks & Risinger, *supra* note 94, at 1058.

[FN96]. *Id.* For a particularly egregious example of how investigator-examiner communications affect outcomes, see Giannelli, *Admissibility of Lab Reports: The Right of Confrontation Post-Crawford*, *supra* note 20, at 31. Professor Giannelli points to the case of *Stevens v. Bordenkircher*, 746 F.2d 342 (6th Cir. 1984), in which the state introduced an autopsy report that specified that the cause of death was a gunshot wound. An evidentiary hearing revealed that the coroner never conducted an autopsy and could not independently determine the cause of death. *Id.* at 345-46. The autopsy “report” was based entirely upon the police investigator’s statements to the examiner to the effect that the deceased had been shot. *Id.*

[FN97]. For a discussion of scientific observer errors and the absence of adequate control measures, see Risinger et al., *supra* note 86, at 27-56.

[FN98]. *Id.* at 32.

[FN99]. *Comm. on Scientific Assessment of Bullet Lead Elemental Composition*, Nat'l Research Council, *Forensic Analysis: Weighing Bullet Lead Evidence* 106 (2004) [hereinafter *Weighing Bullet Lead Evidence*]. Of course, ethical rules prohibit this type of prosecutorial misconduct. See generally *Am. Bar Ass'n, Standards for Criminal Justice* 3-3.3(a) (3d ed. 1993) (“A prosecutor who engages an expert for an opinion should respect the independence of the expert and should not seek to dictate the formation of the expert’s opinion on the subject.”).

[FN100]. Teichroeb, *supra* note 85 (quoting Janine Arvizu, the auditor in charge of the investigation). One analyst whose work was called into question responded that she “frankly had a brain fart.” *Id.* Forensic scientist Denise Olson explained, “We’re all human.... I tried not to let [police bias] influence me. But I can’t say it never does.” *Id.*

[FN101]. *Lee v. Illinois*, 476 U.S. 530, 544 n.4 (1986) (quoting E. McCleary, *McCormick on Evidence* § 246, at 584 (2d ed. 1972)).

[FN102]. In cases involving forensic evidence, “probabilistic evidence is becoming increasingly common and important at trial.” Raeder, *supra* note 91, at 1318. Forensic ipse dixit procedures further exacerbate this problem since the “conclusion” required by a forensic report requires the expert to draw “a line or threshold that presumes or determines the answer” to a complex and probabilistic factual issue. 4 *Am. Jur.* 3d *Proof of Facts* § 24 (2005). Moreover, many wrongful convictions “occur in cases where experts present forensic evidence, much of it in probabilistic form” as is required by the nature of the science itself. Raeder, *supra* note 91, at 1319.

[FN103]. As a result, the NRC urged that “a further explanatory comment should accompany the laboratory conclusions to readily portray the limitations of the evidence.” *Weighing Bullet Lead Evidence*, *supra* note 99, at 110.

[FN104]. *Id.* at 7 (“[Compositional analysis of bullet lead] does not, however, have the unique specificity of techniques such as DNA typing to be used as stand-alone evidence. It is important that criminal justice professionals and juries understand... the significant limitations of this forensic technique.”).

[FN105]. *Id.*

[FN106]. *In re W. Va. State Police Crime Lab., Serology Div.*, 438 S.E.2d 501, 503-04 (W. Va. 1993). West Virginia’s forensic ipse dixit statute

applies only to DUI cases. One wonders whether Zain's misconduct would have been uncovered if West Virginia had had a forensic ipse dixit procedure for proving toxicology and serology outcomes.

[FN107]. *Id.* at 511.

[FN108]. *Id.* at 503. A report by the Laboratory Accreditation Board of the American Society of Crime Laboratory Directors (ASCLD/LAB) concludes that Zain's misconduct included: "(1) overstating the strength of results; (2) overstating the frequency of genetic matches on individual pieces of evidence; (3) misreporting the frequency of genetic matches on multiple pieces of evidence; (4) reporting that multiple items had been tested, when only a single item had been tested; (5) reporting inconclusive results as conclusive; (6) repeatedly altering laboratory results; (7) grouping results to create the erroneous impression that genetic markers had been obtained from all samples tested; (8) failing to report conflicting results; (9) failing to conduct or to report conducting additional testing to resolve conflicting results; (10) implying a match with a suspect when testing supported only a match with the victim; and (11) reporting scientifically impossible or improbable results." *Id.*

[FN109]. *Id.*

[FN110]. *Id.* at 520.

[FN111]. *Id.* at 504.

[FN112]. These procedural deficiencies included: "(1) no written documentation of testing methodology; (2) no written quality assurance program; (3) no written internal or external auditing procedures; (4) no routine proficiency testing of laboratory technicians; (5) no technical review of work product; (6) no written documentation of instrument maintenance and calibration; (7) no written testing procedures manual; (8) failure to follow generally-accepted scientific standards with respect to certain tests; (9) inadequate record-keeping; and, (10) failure to conduct collateral testing." *Id.* at 504 (quoting ASCLD/LAB report).

[FN113]. *Id.* Even the much-vaunted FBI laboratory suffers from human error and malfeasance. Recently FBI Ballistics Examiner Kathleen Lundy made false forensic allegations at the 2002 trial of Shane Ragland, who was convicted of killing University of Kentucky football player Trent DiGiuro. Maurice Possley, Study Shoots Holes in Bullet Analyses by FBI, *Chi. Trib.*, Feb. 11, 2004, at C14.

[FN114]. *Crawford v. Washington*, 541 U.S. 36, 42 (2004).

[FN115]. *Pointer v. Texas*, 380 U.S. 400, 405 (1965).

[FN116]. For example, spurred by successful defense challenges to state forensic claims about blood alcohol levels, the Washington state legislature enacted a statute requiring trial courts to accept, as true, forensic conclusions by the state regarding blood alcohol levels. I am grateful to the crimprof list serve correspondents for their insightful comments about this statute (e-mails on file with author).

[FN117]. Of course, as discussed in Part VI.A., a defendant always has the option of stipulating to the contents of the forensic report. The precise constitutional requirements necessary to demonstrate a constitutionally valid agreement to forgo cross-examination is a subject beyond the scope of this Article. However, as discussed in Part IV.E., the "demand waiver" doctrine employed in the forensic proof-by-affidavit statutes fails constitutional muster.

[FN118]. *Crawford*, 541 U.S. at 60.

[FN119]. *Barbier v. Page*, 390 U.S. 719, 721 (1968) (quoting *Mattox v. United States*, 156 U.S. 237, 242-43 (1895)).

[FN120]. *Id.*

[FN121]. Carol A. Chase, *The Five Faces of the Confrontation Clause*, 40 *Hous. L. Rev.* 1003, 1012 (2003).

[FN122]. For example, almost all state employees who may be called to testify in criminal trials receive training in techniques of trial testimony. Their training also includes preemptive tactics to be used in recordkeeping and documentation of the chain of custody, in order to forestall successful cross-examination or impeachment.

[FN123]. *Crawford*, 541 U.S. at 50-61; see *Lee v. Illinois*, 476 U.S. 530, 540 (1985) (holding that the "right to confront and cross-examine witnesses is primarily a functional right").

[FN124]. *Crawford*, 541 U.S. at 42-43; accord *Kentucky v. Stincer*, 482 U.S. 730, 737 (1987) (asserting that the Confrontation Clause creates "a 'functional' right designed to promote reliability in the truth-finding functions of a criminal trial"). For a discussion of a similar functionalist approach to other important Sixth Amendment guarantees, see Pamela R. Metzger, *Beyond the Bright-Line: A Contemporary Right to Counsel Doctrine*, 97 *Nw. U. L. Rev.* 1635, 1689-99 (2003).

[FN125]. *Crawford*, 541 U.S. at 50.

[FN126]. *Id.*

[FN127]. *Id.* at 51.

[FN128]. *Id.* at 53-54.

[FN129]. The *Crawford* Court considered, and rejected, a strict textual analysis of the Confrontation Clause. 541 U.S. at 42-43 ("The Constitution's text does not alone resolve this case. One could plausibly read 'witnesses against' a defendant to mean those who actually testify at trial, those whose statements are offered at trial, or something in-between.") (internal citations omitted). Instead the Court considered the history of the Confrontation Clause. *Id.* at 43-50. The Court reviewed the constitutional debates and noted that Federalists and Anti-Federalists alike abhorred the use of *ex parte* statements. *Id.* at 48-50. The Court quoted early constitutional debates comparing the use of uncross-examined statements with the Spanish Inquisition and quoted, with approval, the Federal Farmer's assessment of written evidence: "written evidence... [is] almost useless; it must be frequently taken *ex parte*, and but very seldom leads to the proper discovery of truth." *Id.* at 49 (quoting R. Lee, *Letter IV* by the Federal Farmer (Oct. 15, 1787), reprinted in *1 The Bill of Rights: A Documentary History* 469, 473 (Bernard Schwartz ed., 1971)). The Court attributed these rationales to the First Congress's inclusion of "the Confrontation Clause in the proposal that became the Sixth Amendment." *Id.*

[FN130]. *Ohio v. Roberts*, 448 U.S. 56, 67-73 (1990). This may be an overstatement, since the Court made clear that the Confrontation Clause is primarily directed at testimonial statements. It remains unclear whether, and to what extent, the *Ohio v. Roberts* test governs the admission of nontestimonial hearsay offered against a criminal defendant. *Crawford* dictates that the testimonial nature of an out-of-court statement triggers the Confrontation Clause analysis. 541 U.S. at 53-54. For a preliminary assessment of the viability of the *Ohio v. Roberts* doctrine, see Chris Hutton, *Sir Walter Raleigh Revived: The Supreme Court Re-vamps Two Decades of Confrontation Clause Precedent with Crawford v. Washington*, 50 *S.D. L. Rev.* 41, 45-50 (2004); Miguel A. Mendez, *Crawford v. Washington: A Critique*, 57 *Stan. L. Rev.* 569, 572-78 (2005); Thomas J. Reed, *Crawford v. Washington and the Irretrievable Breakdown of a Union: Separating the Confrontation Clause from the Hearsay Rule*, 56 *S.C. L. Rev.* 185, 199-211 (2004).

[FN131]. *Crawford*, 541 U.S. at 60. The *Crawford* Court criticized the *Roberts* test as both "too broad" and "too narrow" inasmuch as it applied "the same mode of analysis whether or not the hearsay consists of *ex parte* testimony." *Id.*

[FN132]. *Id.* In this regard, the critique of *Roberts* reflects the Court's ongoing preoccupation with the proper allocation of fact-finding responsibilities. The tenor of the *Crawford* opinion suggests that the *Roberts* rule misallocated responsibility for the assessment of reliability. Under *Roberts* the trial court's judicial fact-finding (that the statement was trustworthy or reliable) preempted the jury's power to assess the

reliability of evidence. 448 U.S. at 66. While most jury instructions advise the jury that it can disregard any evidence it deems incredible, the absence of confrontation makes this power perfunctory rather than meaningful.

[FN133]. Crawford, 541 U.S. at 61. The inquiry is framed differently if a court considers the admissibility of a laboratory report when the report's author testifies. Since Crawford places no limits on the use of an out-of-court statement made by a testifying declarant, state hearsay laws would be the starting point for an admissibility inquiry. For an analysis of post-Crawford admissibility of laboratory reports, see Giannelli, Admissibility of Laboratory Reports: The Right of Confrontation Post-Crawford, *supra* note 20, at 26.

[FN134]. Crawford, 541 U.S. at 68.

[FN135]. *Id.*

[FN136]. *Id.*

[FN137]. *Id.* at 51 (citing Noah Webster, *An American Dictionary of the English Language* (1828)).

[FN138]. *Id.* (citing Webster, *supra* note 137).

[FN139]. *Id.* (“An accuser who makes a formal statement to a government officer bears testimony in a sense that a person who makes a casual remark to an acquaintance does not.”).

[FN140]. *Id.* at 51-52.

[FN141]. *Id.* at 51.

[FN142]. *Id.* at 51-52.

[FN143]. *Id.*

[FN144]. As discussed *infra* in the text accompanying notes 169-76, this is true whether the certificate in question proves only the contents of the report, or also the chain of custody for the tested substance.

[FN145]. Crawford, 541 U.S. at 52.

[FN146]. See, e.g., La. Rev. Stat. Ann. §§ 15:499-501 (1992) (explaining that Louisiana's forensic ipse dixit statute is designed “to provide for proof of certain matters in criminal cases... by certif[ying]... result[s] of [a] laboratory examination of physical evidence”).

[FN147]. Crawford, 541 U.S. at 56-57 n.7.

[FN148]. *Id.* As was discussed in Part III, it is unnecessary to speculate about the “potential for abuse” in government-initiated forensic evidence. There is nearly universal agreement that unscrutinized forensic testing facilitates poor science, faulty laboratory protocols, operator error, and outright falsification of evidence.

[FN149]. See, e.g., *Manocchio v. Moran*, 919 F.2d 770, 775 (1st Cir. 1990) (arguing that the medical examiner is independently reliable and therefore does not need to testify).

[FN150]. See, e.g., *id.* (proposing that in-court testimony is not likely to be based on independent recollection, but rather on the report already submitted into evidence).

[FN151]. See, e.g., *id.* at 775-76 (holding that the Confrontation Clause was not violated when the court admitted an autopsy report without any showing that the examiner was unavailable).

[FN152]. See, e.g., *id.* at 775 (holding that an autopsy report is routine and standardized because of the high-volume of autopsies performed); *Reardon v. Manson*, 806 F.2d 39, 41 (2d Cir. 1986) (arguing that the high volume of analyses performed by laboratory mitigates in favor of ignoring the unavailability requirement).

[FN153]. *Miller v. State*, 472 S.E.2d 74, 79 (Ga. 1996) (“[I]ncreased work demands do not make the expert analysts ‘unavailable’ to testify.”).

[FN154]. Of course, if one concludes that the forensic reports are not testimonial, at most their admission is limited by the Roberts rule; or, it may be that the Confrontation Clause does not apply at all to those statements.

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[FN275]. Legislators have described the narcotics trade as a matter of national security. As a result, for nearly 35 years, heightened enforcement has been both “straining resources and serving as a justification for the dilution for traditional procedures of law enforcement and criminal prosecution.” Michael D. Blanchard & Gabriel J. Chin, *Identifying the Enemy in the War on Drugs: A Critique of the Developing Rule Permitting Visual Identification of Indescript White Powder in Narcotics Prosecutions*, 47 *Am. U. L. Rev.* 557, 559 (1998). During 2000 there were 1,579,566 arrests for drug offenses. Ryan S. King & Marc Mauer, *Distorted Priorities: Drug Offenders in State Prisons 1* (2002) (citing Federal Bureau of Investigation, *Crime in the United States: Uniform Crime Reports* (2000)). This number represents a threefold increase from only twenty years before when, in 1980, there were 580,900 drug arrests. *Id.* “There is little doubt that the perceived exigencies of the drug war impact evidentiary decisions on narcotics prosecutions.” Blanchard & Chin, *supra*, at 559-60.

[FN276]. According to Professor Dripps, “process-oriented theories of judicial review would suggest that unconstitutional legislation will rarely be confined to a single jurisdiction [because] the political pressures that produce its adoption in one place are likely to operate more broadly.” Dripps, *supra* note 233, at 1692.

[FN277]. In this regard, constitutional cheats are more likely to succeed when they are fact-intensive, rather than pro forma, invocations of constitutional rights. See, e.g., William J. Stuntz, *The Uneasy Relationship between Criminal Procedure and Criminal Justice*, 107 *Yale L.J.* 1, 38-40 (1997) (discussing why defense attorneys are more likely to make suppression motions than engage in other, more affirmative, discovery, investigation, motions, and trial defenses).

[FN278]. It is axiomatic that responsible defense counsel must request and review the chain-of-custody and laboratory records in order to make an informed decision about the defense strategy. However, most forensic ipse dixit statutes do not provide information about underlying data or chain-of-custody records. See *supra* notes 43-44 and accompanying text. Of course, fear of sentencing consequences might discourage an effective and zealous defense attorney from pursuing forensic discovery, particularly if the client indicates a belief that the laboratory results are substantially correct. See Margareth Etienne, *Remorse, Responsibility, and Regulating Advocacy: Making Defendants Pay for the Sins of Their Lawyers*, 78 *N.Y.U. L. Rev.* 2103, 2111-12 (2003) (asserting that judges use the “acceptance of responsibility” provision of the federal sentencing guidelines to penalize defendants whose lawyers over-zealously represent them. “Lawyers... play a game of all-or-nothing by balancing the chance that zealous advocacy will result in acquittal against the potential negative consequences for their clients if it does not.”).

[FN279]. See *supra* notes 14-15 and accompanying text.

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[FN284]. *Gideon v. Wainwright*, 372 U.S. 335, 344 (1963).

[FN285]. *Id.* However, *Ake*, which authorizes the appointment of experts to assist the defense, has been read quite narrowly by courts. See Carlton Bailey, *Ake v. Oklahoma and an Indigent Defendant's ‘Right’ to an Expert Witness: A Promise Denied or Imagined?*, 10 *Wm. & Mary Bill Rts. J.* 401, 452-58 (2002).

[FN286]. In the federal context, this requires voting the President out of office since the Attorney General is appointed by the Chief Executive.

[FN287]. But see *Inmates of Attica Corr. Facility v. Rockefeller*, 477 F.2d 375, 381 (2d Cir. 1973) (suggesting that the legislature can preclude,

but not compel, prosecutorial choices). That is, the legislature can decriminalize certain conduct, thereby eliminating the possibility of prosecution. However, a legislative choice to criminalize conduct does not have the corresponding effect of forcing prosecution to charge those who may have engaged in that conduct.

[FN288]. See *Wayte v. United States*, 470 U.S. 598, 607-08 (1985) (noting that the government has broad, though not unfettered, discretion in deciding whom to prosecute; this allows the government to consider factors such as law enforcement priorities, resource conservation, and case strength when deciding which cases to pursue).

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[FN292]. Stuntz, *supra* note 277, at 12. However, some of the most significant rights-enforcing criminal procedure cases began as pro se litigations. See, e.g., *Gideon v. Wainwright*, 372 U.S. 335, 337 (1963) (describing how petitioner originally represented himself). In the forensic ipse dixit context, some of the appellate and post-conviction litigation arises out of an allegation that counsel failed to consult the client about the decision not to challenge the forensic evidence.

[FN293]. Stuntz, *supra* note 277, at 12.

[FN294]. In the alternative, a smart prosecutor might offer plea-bargaining concessions responsive to the defendant's particular complaint.

[FN295]. While better information-sharing among defense attorneys might improve this problem, perhaps the individual nature of the defense attorney's role necessitates an institutional response that grants standing to someone responsible for litigating these issues outside of the traditional adversary system. Indeed, courts have resisted the idea that an individual defendant can seek to enforce a constitutional directive to the legislature, *State v. Peart*, 621 So. 2d 780, 786 (La. 1993), and have been similarly loathe to permit criminal defense attorneys to file claims on behalf of prospective clients, *Kowalski v. Tesmer*, 125 S.Ct. 564, 570 (2004).

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[FN307]. The ABA Criminal Justice Section Subcommittee on Forensic Science believes that only “adequate funding, accreditation of crime laboratories and medical examiner offices, certification of examiners, standardization and publication of procedures, comprehensive and reciprocal pretrial discovery of expert testimony, defense access to experts for indigents, and training of lawyers in forensic science” will rectify the forensic evidence crisis.” Raeder, *supra* note 91, at 1320.

***24 MELENDEZ-DIAZ, ONE YEAR LATER**

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In September 2004, in a routine cocaine trafficking trial in Suffolk Superior Court, the prosecution offered three drug analysis certificates, each containing a chemist's sworn statement that the seized substance was cocaine. The defendant's lawyer objected, arguing that the Sixth's Amendment's Confrontation Clause forbade the admission of the drug certificate without cross-examination of the chemist who prepared the certificate. The objection was overruled, and the claim fared no better on appeal: the Massachusetts Appeals Court rejected the argument in a footnote and the Supreme Judicial Court denied Melendez-Diaz's application for further appellate review. [FN1]

But that timely objection brought dramatic change to the criminal justice landscape in both Massachusetts and elsewhere when, in June 2009, the United States Supreme Court vacated Melendez-Diaz's conviction, ruling that the admission of the drug certificates violated his right under the Sixth Amendment to "be confronted with the witnesses against him." *Melendez-Diaz v Massachusetts*, 129 S.Ct. 2527 (2009). Relying on its prior decision in *Crawford v. Washington*, 541 U.S. 36 (2004), the Supreme Court held that the drug certificates were part of "the core class of testimonial statements" covered by the Confrontation Clause and "thus inadmissible unless the witness appears at trial or, if the witness is unavailable, the defendant had a prior opportunity for cross-examination." *Id.* at 2531.

Justice Scalia's 5-4 majority opinion rejected a broad range of arguments the Commonwealth advanced against this interpretation of the Confrontation Clause. Two merit particular mention. First, the Court dismissed the Commonwealth's contention that lab analysts' certificates were admissible because they reflected the results of "neutral, scientific testing." *Id.* at 2536. Citing the recent National Academy of Sciences report criticizing the state of forensic science in the United *25 States, [FN2] the Court held that "[c]onfrontation is one means of assuring accurate forensic analysis ... [l]ike expert witnesses generally, an analyst's lack of proper training or deficiency in judgment may be disclosed in cross-examination." *Id.* at 2536-37.

The Court also rejected several practical objections raised by the Commonwealth and Justice Kennedy's dissenting opinion. The majority opinion discounted Justice Kennedy's contention that requiring forensic analysts to come to court would "disrupt forensic investigations across the country and ... put prosecutions nationwide at risk of dismissal based on erratic, all-too-frequent instances when a particular laboratory technician ... simply does not or cannot appear" in court. *Id.* at 2549. Justice Scalia posited that "[d]efense attorneys and their clients will often stipulate to the nature of the substance in the ordinary drug case. It is unlikely that the defense counsel will insist on live testimony whose effect will be merely to highlight rather than cast doubt upon the forensic analysis." *Id.* at 2542. [FN3]

Melendez-Diaz in the SJC and the Appeals Court

In the year following that decision, one thing is absolutely clear: cases raising challenges based on *Melendez-Diaz* have occupied an extraordinary amount of attention from this state's appellate courts. In the first fifteen months following the Supreme Court's opinion, the Massachusetts Supreme Judicial Court and the Appeals Court have decided 164 appeals raising *Melendez-Diaz* challenges: The SJC decided 15 and the Appeals Court 149 (22 by published opinion; 127 by unpublished Rule 1:28 opinions.) In nearly all of these cases, defense lawyers have challenged the admission of two kinds of certificates which were commonly admitted as a substitute for expert testimony in criminal cases in the years before *Melendez-Diaz*: drug certificates of the kind at issue in *Melendez-*

Diaz itself, and similar certificates prepared by police ballisticians, offered by the prosecution in gun cases, attesting that a gun seized from a defendant is in fact a functioning firearm. The SJC has held a defendant's conviction must be vacated where a drug or ballistics certificate was admitted unless the evidence contained in the certificate was "harmless beyond a reasonable doubt." *Commonwealth v. Vasquez*, 456 Mass. 350, 355 (2010). Applying this standard, the SJC and Appeals Court have vacated 129 of the 164 convictions reviewed, finding in nearly all of the other 35 cases that admitting drug or ballistics certificates, though improper, was harmless error. [FN4] Appellate courts have concluded that the admission of drug certificates was harmless error when, for example, the prosecution offered a defendant's statement that the substance was crack cocaine and police officers testified that the drug "field-tested" positive for cocaine. *Commonwealth v. Connolly*, 454 Mass. 808, 830-31 (2009).

Impact on the Trial Courts

While the appellate courts have been reviewing past convictions, prosecutors, defense lawyers, trial court judges and the state's forensic scientists have been grappling with *Melendez-Diaz* in real time. The State's Executive Office of Public Safety has compiled statistics on court appearances by experts that shed some light on *Melendez-Diaz's* impact. [FN5] In the first six months of 2009, before *Melendez-Diaz* was decided, the State Police lab received only seven requests for its chemists to testify in court in drug cases. In the next six months, that number increased to 247. In the first five months of 2010, that number has increased still further, to 476. The State Police lab is only one of four state labs that does drug testing; chemists in the other labs (at the University of Massachusetts and at Department of Public Health facilities in Jamaica Plain and Amherst), have received an additional 1,130 requests to testify, bringing the total during that five month-period to 1,606. That does not mean, or *26 course, that chemists have actually testified that many times. Many cases were continued or resulted in pleas. Rarely--about five percent of the time, according to the state's statistics -- defense counsel stipulate, as Justice Scalia suggested they *often* would, that the substance is, in fact, the charged drug. But during the first five months of 2010, chemists from the four labs testified 184 times in drug cases. This is not surprising, as most defense counsel see little advantage to stipulating to an essential element of the offense.

This new role -- the bench chemist as a testifying witness -- has imposed a serious burden on the resources of the state testing labs, where budget constraints have prevented new hiring. The state has responded to this challenge smartly, shifting drug testing between labs to balance workloads and stopping routine testing to determine drug *purity*, which prosecutors are not required prove as an element of a drug offense. See *Commonwealth v. Beverly*, 389 Mass. 866, 868-69 (1983). The labs' workloads have also benefitted by the passage of Question 2 on the 2008 ballot, G.L.c. 94C, §32L, which de-criminalized possession of one ounce or less of marijuana. Chemists no longer use valuable lab time analyzing drugs in most marijuana possession cases.

Expert testimony in gun cases has also become more commonplace. In the eleven months following *Melendez-Diaz*, the State Police crime lab has received 308 requests for ballisticians to testify. Statistics documenting the frequency of such testimony are not available, but the numbers are clearly significant.

Behind these statistics lay a host of new practical problems. Often the most immediate involve locating and scheduling the necessary experts. Chemists, DNA analysts or ballisticians must now juggle multiple, and often conflicting, court dates and must negotiate with Assistant District Attorneys from different counties who each need the same expert on the same trial date. Frequently the "solution" will be for the expert to appear in the morning in one court and in another in the afternoon. Experts must review their work and prepare for testimony in several different cases at the same time. In addition to the time spent out of the lab to be in court, there is the additional time needed for travel and trial preparation. These problems are compounded when state experts leave state service. Even when such experts can be located, their new employers, understandably, are not willing to compensate them for testifying for the Commonwealth, and often compensation at a private expert's rates in addition to travel costs may be necessary. The District Attorney's office, which bears those costs within the confines of its budget, must then weigh the nature and strength of their case, the background of the defendant, the feasibility of proceeding without the testimony of that expert and the possibility of resolving the case through a change of plea against the expenditure of resources necessary to obtain the expert's testimony. Post-*Melendez-Diaz*, anecdotal evidence suggests that some prosecutors' offices are more likely, particularly given these resource constraints, to "break down" drug cases -- that is, dropping charges that carry mandatory minimum penalties -- and permitting defendants to plead to lesser charges to avoid the need to bring a chemist to court.

Beyond Guns and Drugs: Emerging Issues

Justice Kennedy's dissent in *Melendez-Diaz* predicted that the Court's holding would extend well beyond the drug certificates that were at issue in that case. Justice Kennedy noted that forensic science is not a solitary endeavor. In many cases, several analysts participate in the review of evidence and, as noted, forensic scientists may leave state service before they are called to testify. Several recent SJC opinions are *27 relevant to the fundamental question raised by Justice Kennedy: whom does the defendant have the right to confront?

This issue has emerged in a number of homicide cases where a medical examiner testified about the victim's cause of death based on an autopsy performed by another pathologist who no longer works in the medical examiner's office. In *Commonwealth v. Durand*, 457 Mass. 574 (2010), for example, the SJC reversed the first degree murder conviction of a defendant in the death of his girlfriend's four-year-old son. The court found that the admission of the testimony of the substitute medical examiner regarding the factual aspects of the autopsy report prepared by the original medical examiner violated the defendant's confrontation rights. *Id.* at 584-85. The substitute medical examiner (Dr. Flomenbaum) testified that, in preparation for his testimony, he had examined the autopsy file of Dr. Philip, who performed the autopsy; the victim's emergency room records; the autopsy photos taken by Dr. Philip and a police officer who was present at the autopsy; a report prepared by the forensic dentist (who testified at trial); and microscopic slides which Dr. Philip had prepared from tissue samples. Flomenbaum testified, in detail, about both the internal and external injuries to the victim which had been observed and catalogued by Philips. Flomenbaum's opinion regarding the internal injuries was based upon his study of a photograph of those injuries and the tissue slides. Neither that photograph nor the slides were introduced into evidence.

Relying upon *Commonwealth v. Nardi*, 452 Mass. 379 (2008), the court found that the trial judge erred in permitting Flomenbaum to testify to the factual findings contained in Philip's autopsy report. Although the court ruled that Flomenbaum's *opinion testimony* about the cause of death was properly admitted, the *facts* he recited to the jury, particularly his graphic description of the injuries and the internal tearing and severing of two organs, should not have been admitted. Since this factual evidence both supported Flomenbaum's opinions and bore directly on the issue of extreme atrocity or cruelty, the court, applying the substantial risk of a miscarriage of justice standard, could not conclude that the erroneously admitted evidence had little or no effect on the jury's decision to convict the defendant of first degree murder based on a theory of extreme atrocity or cruelty.

Another area of interest, and one where multiple state analysts may participate in the examination of forensic evidence in a single case is the presentation of DNA evidence. In *Commonwealth v. Banville*, 457 Mass. 530 (2010), the defendant, who had been convicted of the murder of his seventeen year old niece, claimed that the admission of DNA evidence against him violated his Confrontation Clause rights. In *Banville*, the prosecution offered evidence that the victim's DNA was found in blood stains on the defendant's clothing and the defendant's DNA was found under the victim's fingernails and in saliva swabbed from her breast. *Id.* at 533-534. One chemist (who did not testify) generated the DNA profiles of the victim and the defendant; the testifying DNA expert compared those profiles to the DNA found on the "crime scene" evidence--the defendant's clothing and the victim's body. The testifying expert did not mention any details of the work done by the chemist who generated the profiles, but opined that the DNA profile in the crime scene evidence was a "match" or in some cases, "not a match" with the defendant's or victim's profiles. The witness also testified that that the probability that the DNA was that of someone other than the defendant was one in 5 quadrillion as to the sample under the victim's nails and one in 410 trillion as to the saliva sample. *Id.*

The defendant contended that his Confrontation Clause rights were violated because he did not have the opportunity to cross-examine the chemist who generated the DNA profiles. The court found that the *28 testifying chemist's opinion that the defendant's profile "matched" the blood and saliva found on the victim's body violated the defendant's Confrontation Clause rights because it included "testimonial hearsay" -- the non-testifying expert's determination of the defendant's DNA profile. *Id.* at 541 n. 3. In contrast, the testifying expert's opinion that the probability "of the DNA in question being that of someone other than that defendant was on the order of one in five quadrillion" did not violate the defendant's constitutional rights because it was a statement of the testifying expert's opinion, not a description of the facts determined by the non-testifying expert. As Justice Spina wrote: "Opinion testimony, though based on hearsay, is admissible and does not offend the Sixth Amendment so long as the witness does not testify to the details of the hearsay on direct examination. Thus, the witness giving the opinion testifies at trial only about her own actions and observations, the identification of the hearsay material on which she relies, the

reliance of professionals within her area of expertise on such hearsay and her own opinions. She is subject to cross-examination about those matters. If the cross-examiner chooses to delve into the hearsay basis of the opinion, he is free to do so.” *Id.* at 540. In *Banville*, the SJC affirmed the defendant's conviction, finding that defense counsel had waived the issue by failing to object to the expert's testimony about a “match” and concluding that the expert's testimony did not create a substantial likelihood of a miscarriage of justice. [FN6]

Conclusion.

One year after *Melendez-Diaz*, some questions are clearly settled. Lawyers and judges know that drug and ballistic certificates cannot be offered over a defendant's objection. And a testifying expert *may* generally offer *opinions* based upon the expert's review of testing and analysis performed by others, but *may not* recite the test results or factual findings of non-testifying experts. Nonetheless, the exact line between permissible and impermissible questions has as the SJC itself has noted, “sometimes proven difficult to apply during the course of the trial,” *Durand*, 457 Mass. at 586 n.13, and it seems clear that final impact of the objection *Melendez-Diaz's* trial counsel's made to the admission of drug certificates in Suffolk Superior Court in September 2004 will not be known fully for years to come.

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[FN1]. *Commonwealth v. Melendez-Diaz*, 69 Mass. App. Ct. 1114, 2007 WL 2189152, *4 n. 3 (July 31, 2007), *review denied*, 449 Mass. 1113 (2007).

[FN2]. National Research Council of the National Academies, STRENGTHENING FORENSIC SCIENCE IN THE UNITED STATES: A PATH FORWARD (2009).

[FN3]. For a helpful discussion of the arguments advanced in the case, see Miller & Ricciutti, *Crawford Comes to the Lab: Melendez-Diaz and the Scope of the Confrontation Clause*, 53 Boston Bar Journal 13 (Fall 2009).

[FN4]. The small number of cases where there was a split decision--where, for example, the court vacated drug convictions, but affirmed gun convictions-- have been counted as “vacated” convictions.

[FN5]. The Executive Office of Public Safety provided the statistics reported here.

[FN6]. Defense counsel's efforts to extend *Melendez-Diaz* to other records commonly offered in criminal cases, such as certified copies of Registry of Motor Vehicle and court records, have been unsuccessful. *Commonwealth v. McMullin*, 76 Mass. App. Ct. 904 (2010).

Article

***35 TODAY'S CONFRONTATION CLAUSE (AFTER CRAWFORD AND MELENDEZ-DIAZ)**

G. Michael Fenner [FNd1]

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I. INTRODUCTION

In the Sixth Amendment to the United States Constitution, the Confrontation Clause states that, “[i]n all criminal prosecutions, the accused shall enjoy the right . . . to be confronted with the witnesses against him.” [FN1] This right applies to federal prosecutions directly from the Sixth Amendment and to state and local prosecutions by incorporation into the Due Process Clause of the Fourteenth Amendment. [FN2] In recent years the Supreme Court of the United States's understanding of the meaning of this Clause may well be the single part of constitutional law--certainly of criminal procedure--that has undergone the most radical change. [FN3]

Two Supreme Court judgments in roughly the past five years have introduced this change and have greatly expanded the right of the accused in criminal prosecutions to confront the witnesses against them. This Article is about this sharp turn in the law of the Confrontation Clause. After a brief discussion of the history of the Court's understanding of the Clause, this Article settles into a discussion of its new understanding, as found primarily in the Court's opinion in 2004's *Crawford v. Washington* [FN4] and its 2009 opinion in *Melendez-Diaz v. Massachusetts* [FN5]--a discussion of where the Court's understanding sits today and where it may be headed. Throughout, the Article deals with the details of the coverage of the Confrontation Clause--when the right attaches and what the Clause requires when the right does attach.

Part II presents a brief history of the High Court's treatment of the Confrontation Clause--how the clause was understood prior to 2004 and how, in that year, that understanding changed. [FN6] Part III separates out and discusses Justice Thomas's understanding of the Clause, important because it supplies the fifth vote for the majority's new understanding of the right and, therefore, may be the vote that controls its scope. [FN7] Part IV discusses the elements foundational to the attachment of the confrontation right: testimonial statements; offered in a criminal prosecution; offered against the accused; and offered to prove the truth of the matter asserted (and, of course, the affect *Crawford* and *Melendez-Diaz* have had upon these requirements). [FN8] Part V is about the importance of raising Confrontation Clause issues before the start of the trial. [FN9] Part VI discusses situations where the right attaches and might at first glance appear to be infringed, but on a closer look is not. [FN10] Part VII discusses inefficiencies created by the right to confront, how the inefficiencies are not as great as they may at first glance seem, and how, in any event, whether the right is inefficient or not is largely irrelevant. [FN11] Part VIII concerns the traumatized victim of the crime-on-trial who will be further traumatized if made to testify against the accused victimizer. [FN12] Part IX covers situations where the Confrontation Clause might well have applied but the accused has either forfeited the right to invoke the clause or waived the right-to-confront objection--waived it during the trial or, upon appropriate motion, well before the trial. [FN13] Part X is about the harmless error rule as it applies to the confrontation right. [FN14] Part XI is a brief conclusion. [FN15]

***37 II. A BRIEF HISTORY OF THE SUPREME COURT OF THE UNITED STATES'S INTERPRETATION OF THE CONFRONTATION CLAUSE**

There is a close, perhaps obvious, relationship between the Confrontation Clause and the hearsay rule. Each deals with the same problem--the testimonial infirmities attached to second-hand evidence. [FN16] Each bars the receipt of some second-hand evidence. [FN17]

Exceptions to the bar of the hearsay rule are based on findings that particular categories of statements [FN18] or particular individual statements [FN19] tend to be reliable and, in some cases, that there is an unusual need for the evidence. [FN20] Hearsay reliability can be found in a number of ways: there was contemporaneous cross examination, the statement was made in the face of impending death or with the expectation that the it would lead to medical diagnosis or treatment, the time between the event and the statement was too short for the declarant to have fabricated a lie or have forgotten the relevant facts, and so forth. [FN21]

The limits to the bar of the Confrontation Clause also have to do with reliability. For years, Confrontation Clause jurisprudence more or less tracked the hearsay rule. The evidentiary rule and the constitutional clause dealt with the problem of the reliability of second-hand evidence in much the same way. The Confrontation Clause did “not bar admission of an unavailable witness's statement against a criminal defendant if the statement [bore] adequate indicia of reliability. To meet that test, evidence [had to] either fall within a firmly-rooted hearsay exception or bear particularized guarantees of trustworthiness.”*38 [FN22] In Crawford v. Washington, [FN23] the Court dissolved the partnership between the Confrontation Clause and the hearsay rule. Reliability as a limit on the scope of the right to confront witnesses is no longer assessed by reference to the hearsay rule or to singular guarantees of trustworthiness inherent in the individual out-of-court statement at issue. Rather, “reliability [must] be assessed in a particular manner: by testing in the crucible of cross-examination.” [FN24] Where the confrontation right applies, the accused must have had or currently have an opportunity to confront the witness through cross-examination.

The opinion in Crawford states these two important Confrontation Clause principles: The right to confront the declarant applies against “testimonial” out-of-court statements offered against the accused in a criminal prosecution to prove the truth of the matter asserted in the statement. [FN25] Introducing such a statement into evidence infringes the confrontation right of the accused unless the declarant's in-court testimony is unavailable and the accused had an opportunity to cross-examine the declarant. [FN26]

***** SECTIONS OMITTED *****

VI. SITUATIONS WHERE THE RIGHT ATTACHES BUT IS NOT INFRINGED

***** SECTIONS OMITTED *****

*75 D. Testimony From Experts Other Than Those Who Performed the Underlying Expert Analysis

Surely the Confrontation Clause does not mean that all expert testimony must be based on first-hand observation. Such a rule would do away with expert testimony in criminal trials, except, of course, for that which is not testimonial or is offered by the defendant. All experts base opinions on what they have read, what they have been told, work that others have done. Experts base their opinions on the work of generations of experts who came before them. [FN191]

Granted, much of what most experts rely upon is not testimonial. The expert work done by preceding generations of experts was not done for the primary purpose of establishing facts for later use in criminal prosecutions. Only the final expert in the chain will have to be presented for confrontation, i.e., the expert who took the work of the preceding generations and applied it to a certain set of facts in order to establish facts for later use in a criminal prosecution.

But it might have been--the work of experts of generations past might have been done for the primary purpose of putting criminals behind bars. Perhaps it is important for the prosecutor to be able to identify the exact kind of knife used in a fatal stabbing. The prosecutor has an expert witness, an FBI agent expert in knives and knife wounds. This agent has an opinion that the knife in question is a particular kind manufactured by one particular company in the early 1950s. The agent's opinion is based on observation of the wound and an FBI reference manual. A now-unavailable agent of an earlier generation prepared the manual with the specific intent that it would be used to help catch and convict criminals. [FN192]

Even here, however, the reference work does not seem to be testimonial. Whether it is or not may depend on whether the Confrontation Clause's primary-purpose test requires a primary purpose related to a particular crime, series of crimes, or criminal enterprise. The primary purpose of the reference work and its author may have been to put criminals in prison. Assuming it was prepared for use against persons accused, it was not prepared for use against "the accused." *76 The author had no intention specific to this particular crime, its victim, or its perpetrator. The statement is not in any direct way testimonial against the accused. If the primary purpose was testimonial, it still may have been too general to call for the attachment of the Confrontation Clause. And yet, isn't the author of the reference manual a witness against the accused?

So, let us consider this case. The technician who prepared a lab report is unavailable. Perhaps the technician has died. [FN193] Perhaps the technician has not died, and it is rather that multiple technicians and analysts did the work that went into the report in question and the prosecution does not want to call each and every one of them. In that case the prosecution may be able to call another expert, one who can form his or her own expert opinion based on the report. [FN194] The expert called as a witness can state his or her own expert opinion and can be cross-examined about its basis, and the trier of fact can take the expert's opinion for what it is worth. This witness can be confronted. [FN195] "The vital questions--was the lab work done properly? *77 what do the readings mean?--can be put to the expert on the stand. The background data need not be presented to the jury. . . . [T]he Sixth Amendment does not demand that the chemist or other testifying expert have done the lab work himself." [FN196]

When this "other" expert is called to the stand, the objections come from the rules of evidence, not the United States Constitution. Is the expert competent? Is the testimony relevant? If the testimony survives the evidentiary objections and is admitted, then the question becomes whether this testimony, along with any other evidence, is enough to satisfy the prosecution's burden of production; enough proof of the relevant essential-element of the crime; enough to survive a motion to dismiss and get the case to the jury. The basis evidence--the out-of-court statements prepared by the hands-on experts--may well not be admissible, but the expert opinion of the testifying expert may well be, and it may well be enough. The question becomes whether or not a conviction can be supported without the basis evidence, and not whether the testifying expert's opinion survives the Confrontation Clause objection.

The expert to be confronted does not always have to be the exact same expert who did every piece of the leg-work, who prepared every part of the report, and it need not even be the one who prepared the report, as long as the new expert has formed a relevant and independent conclusion. The testimony is the conclusion of the new expert, who can be confronted. Just the same as expert opinion can be a "way around" the bar of the hearsay rule, [FN197] it can be a way to satisfy the demands of the Confrontation Clause.

Here is the combination required for using another expert, other than the one who did the hands-on work, as the testifying witness. First, if the only testimony is the opinion of the testifying expert and whatever relevant first-hand knowledge that expert has (say, for example, about the methodology used, how it was employed in the lab in question at the time in question, and how all of this is relevant to the case at hand), then all of the testimony on the matter is subject to confrontation. Second, for the prosecution to get past a motion to dismiss, the opinion of the testifying expert must be enough that a reasonable juror could find the essential element established. Third, if *78 the defendant wishes to bring up something--anything--about the underlying work of non-testifying experts, the defendant is free to do so in whatever possible way, including vigorously cross examining the testifying expert, calling the experts who did the work, and calling other experts to dispute the testifying expert.

VII. THE PROBLEM OF INEFFICIENCY

The Confrontation Clause makes many a criminal prosecution much less efficient. Consider lab reports. Calling to the stand the expert who prepared a lab report that fits under an exception to the hearsay rule is not efficient, and may well seem to be a significant waste of the time and resources of the court, the expert, and the laboratory for which the expert works. The inefficiencies increase when the analysis in question required a number of different steps, each done by a different set of hands and eyes. [FN198] Must each and every person involved in the analysis be called to the stand, even those who have no independent memory of the particular test in question?

It might seem, by the way, that calling analysts and technicians who have no independent memory of the particular test in question is not just inefficient, but a total and complete waste of time and resources. Even these witnesses, however, can provide significant relevant information. Most of them will have general knowledge of how the lab in question conducts the relevant tests: chance of contamination, rate of error, expertise and experience of the technicians, quality of the equipment, standards controlling techniques, and other factors relevant to the weight, if any, the trier of fact should assign to the evidence. The analyst with no present memory of the specific test offered into evidence may still have a great deal of relevant knowledge. Furthermore, “[c]onfrontation is designed to weed out [both] the fraudulent analyst [and] the incompetent one” [FN199] As for the former, just the prospect of being called to the stand and subjected to cross-examination may well deter some fraud from ever occurring. [FN200]

Regardless, the inefficiency problem is not as great as it might first seem. As the Supreme Court of the United States has noted, not everyone “whose testimony may be relevant in establishing the chain *79 of custody, authenticity of the sample, or accuracy of the testing device[] must appear in person as part of the prosecution's case.” [FN201] Sometimes a prosecutor will forgo offering chain-of-custody evidence; when that is so, there is no chain-of-custody witness (in-court or out) against the accused; when there is no witness, the right does not attach. [FN202] If the defendant wishes to make chain of custody an issue, the defendant certainly can put on chain-of-custody evidence, but the right to confront does not apply because the prosecutor has not put on any such evidence against the accused.

In addition, a significant amount of what goes into laboratory analysis is nontestimonial. For example (and as discussed above), when technicians provide routine equipment maintenance, the affidavits they prepare certifying the maintenance are, by and large, nontestimonial. [FN203]

Furthermore (also as discussed above), some of the inefficiency will be reduced if the prosecutor is allowed to enter lab reports into evidence, under an exception to the hearsay rule and without calling the expert witnesses who prepared them, while standing ready to produce such witnesses if the defendant chooses to call them to the stand. [FN204]

Finally, in some cases where the prosecutor must call a witness, the prosecutor should be able to call a single expert-witness to testify and submit to confrontation--one single expert from among the four or five who did the work reflected in the report or even one single expert who had no hands-on involvement with any of the work reflected in the report. [FN205]

In the end, however, the problem of inefficiency does not matter much, it is largely irrelevant. Inefficiency is a policy argument, not a constitutional-right argument. [FN206] Efficiency may be the hallmark of *80 good policy, but it certainly is not the hallmark of individual rights, most of which mean to make government less efficient. [FN207] In fact, a large part of the reason the United States Constitution protects individual rights at all is to prevent government from taking the most efficient approach--the cheapest and easiest approach--when doing so infringes fundamental values. Efficiency should not need constitutional protection; the fundamental values that create inefficiency do.

***** SECTIONS OMITTED *****

***94 X. HARMLESS CONSTITUTIONAL ERROR**

Denial of the accused's right to confront witnesses is not always cause for reversal of the judgment of conviction. [FN263] As long as the defendant ““had counsel and was tried by an impartial adjudicator, there is a strong presumption that any other [constitutional] errors that may have occurred are subject to harmless-error analysis.”” [FN264] This includes Confrontation Clause violations. [FN265]

A violation of the Confrontation Clause is harmless error if the appellate court concludes beyond a reasonable doubt that the constitutional error “did not contribute to the verdict.” [FN266] Phrasing is critical here. The question the appellate court asks must be whether it can *95 say beyond a reasonable doubt that the constitutional error did

not contribute to the verdict. The question cannot be whether the defendant would have been convicted anyway, that is, “in a trial that occurred without the error. . . [The latter would] hypothesize a guilty verdict that was never in fact rendered [and] no matter how inescapable the findings to support that verdict might be [it] would violate the jury-trial guarantee.” [FN267]

Harmless-error review takes the measure of, on the one hand, the evidence that was the product of constitutional error and, on the other, the rest of the evidence and asks how much of an effect each had on the verdict. The party who was “the beneficiary of the error,” i.e., the prosecutor, is the party who has the burden of convincing the appellate court that the error was harmless. [FN268]

If the prosecutor meets this burden, then the judgment of conviction will not be reversed. [FN269]

***** SECTION OMITTED *****

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[FN1]. U.S. Const. amend. VI.

[FN2]. *Melendez-Diaz v. Massachusetts* 557 U.S. ___, ___, 129 S. Ct. 2527, 2531 (2009); *Pointer v. Texas*, 380 U.S. 400, 403 (1965).

[FN3]. U.S. Const. amend. VI. Regarding the “radical” change, see, e.g., *Melendez-Diaz*, 129 S. Ct. at 2543 (“It is remarkable that the Court so confidently disregards a century of jurisprudence. We learn now that we have misinterpreted the Confrontation Clause--hardly an arcane or seldom-used provision of the Constitution--for the first 218 years of its existence.”) (Kennedy, J., dissenting); *Danforth v. Minnesota*, 552 U.S. 264, ___, 128 S. Ct. 1029, 1031 (2008) (In *Crawford* “we announced a ‘new rule’ for evaluating the reliability of testimonial statements in criminal cases.”); *Crawford v. Washington*, 541 U.S. 36 (2004); *passim*, below. But see, *Melendez-Diaz*, 129 S. Ct. at 2533 (“In faithfully applying *Crawford* to the facts of this case, we are not overruling 90 years of settled jurisprudence.”).

[FN4]. 541 U.S. 36 (2004).

[FN5]. 557 U.S. ___, 129 S. Ct. 2527 (2009).

[FN6]. See *infra* Part II and accompanying notes.

[FN7]. See *infra* Part III and accompanying notes.

[FN8]. See *infra* Part IV and accompanying notes.

[FN9]. See *infra* Part V and accompanying notes.

[FN10]. See *infra* Part VI and accompanying notes.

[FN11]. See *infra* Part VII and accompanying notes.

[FN12]. See *infra* Part VIII and accompanying notes.

[FN13]. See *infra* Part IX and accompanying notes.

[FN14]. See *infra* Part X and accompanying notes.

[FN15]. See *infra* Part XI.

[FN16]. The lack of cross-examination of the declarant prevents the accused from testing the testimonial infirmities: declarant's perception, memory, sincerity, and honesty. G. Michael Fenner *The Hearsay Rule 5-6* (2d ed. 2009) [hereinafter *Fenner, The Hearsay Rule* (2d ed.)].

[FN17]. See, e.g., *Giles v. California*, 554 U.S. ___, ___, 128 S. Ct. 2678, 2686 (2008) (Pre-constitutional “courts ... excluded hearsay evidence in large part because it was uncontroverted. As the plurality said in *Dutton v. Evans*, 400 U.S. 74, 86 (1970), “[i]t seems apparent that the Sixth Amendment's Confrontation Clause and the evidentiary hearsay rule stem from the same roots.”) (emphasis in original).

[FN18]. See particularly, *Fed. R. Evid.* 803 and 804.

[FN19]. See particularly, *Fed. R. Evid.* 807.

[FN20]. See particularly *Fed. R. Evid.* 804 (declarant's in-court testimony must be unavailable) and *Fed. R. Evid.* 807 (“the statement [must be] more probative on the point for which it is offered than any other evidence ... the proponent can produce through reasonable efforts.”).

[FN21]. See, e.g., in the order in which they appear in the main text, *Fenner, The Hearsay Rule* at Ch. 4(II)(D) (2d ed.) (the former testimony exception); *Fenner, The Hearsay Rule* at Ch. 3(V)(C) (2d ed.) (the medical diagnosis or treatment exception); *Fenner, The Hearsay Rule* at Ch. 3(II)(C) (2d ed.) (the present sense impression exception).

[FN22]. *Crawford v. Washington*, 541 U.S. 36, 40 (2004) (citations and internal quotation marks omitted) (describing the preexisting rule established in *Ohio v. Roberts*, 448 U.S. 56 (1980)).

[FN23]. 541 U.S. 36 (2004)

[FN24]. *Crawford*, 541 U.S. at 61. “[T]he only indicium of reliability sufficient to satisfy constitutional demands is the one the Constitution actually prescribes: confrontation.” *Id.* at 68-69.

“Dispensing with confrontation because testimony is obviously reliable is akin to dispensing with [a] jury trial because a defendant is obviously guilty.” *Id.* at 62. “Dispensing with confrontation because testimony is obviously reliable” is a nice summary of the so-called *Roberts* rule, the confrontation-rule that pre-existed *Crawford*.

[FN25]. *Id.* at 59. Perhaps this is worth restating in the negative. The right to confront does not apply if the evidence is not an out-of-court statement; if it is not offered to prove the truth of the matter asserted; if it is not offered in a criminal prosecution against the accused; if it is not “testimonial;” or if the accused had a prior opportunity to cross-examine the declarant.

In Justice Clarence Thomas's view the out-of-court statement must be “formalized.” In many cases, his view of the scope of the Clause will provide the controlling fifth vote to make the majority. This is discussed below in Part III of this article.

[FN26]. *Id.* at 68 (“Where testimonial evidence is at issue ... the Sixth Amendment demands what the common law required: unavailability and a prior opportunity for cross-examination.”); *id.* at 53-54 (“[T]he Framers would not have allowed admission of testimonial statements of a witness

who did not appear at trial unless he was unavailable to testify, and the defendant had had a prior opportunity for cross-examination.”); see also *id.* at 59.

*** SECTIONS OMITTED ***

[FN191]. It has been argued that for all of us, expert or not, there is no such thing as first-hand knowledge. “I think that I shall never see a poem lovely as a tree.” Joyce Kilmer, *Trees, Poems, Essays and Letters*, 180 (Robert Coles Holliday ed. 1937). “[H]ow do I know it is a tree? Someone told me.” G. Michael Fenner, *Law Professor Reveals Shocking Truth about Hearsay*, 62 *UMKC L. Rev.* 24 (1993). (““And if a tree was not a tree, he wondered what it really was.”” *Id.* at 24 n.128 (quoting Paul Auster, *City of Glass, The New York Trilogy*, 43 (1985)).

[FN192]. Let us hypothesize that the agent from the 50s said in the preface to his book that was compiled and written for the sole purpose of putting criminals behind bars and he dedicated the book to “the Special Agents who catch the bad guys and see that they are locked away.”

[FN193]. If the prosecution knew the technician was dying it could consider taking the technician's deposition to preserve the testimony for trial. See *Fed. R. Crim. P.* 15. The defendant would have the opportunity to cross-examine the witness at the deposition.

[FN194]. The rules of evidence allow experts to testify to opinions that are based on inadmissible evidence when it reasonable for experts in the field to form such opinions based on such evidence. See, e.g., Fenner, *The Hearsay Rule at 434-36* (2d ed.).

[FN195]. Here is an example of this procedure in practice. “At trial, the government called Alyssa Bance, a forensic scientist with the Minnesota Bureau of Criminal Apprehension, to testify about DNA evidence linking [defendant] to the firearm. Specifically, Bance testified about DNA testing performed by another scientist in the office, Jacquelyn Kuriger.” *United States v. Richardson*, 537 F.3d 951, 955 (8th Cir. 2008). Bance did not personally receive the evidence into the lab or “perform or witness any DNA testing of the samples in this case.” *Id.* at 956. Bance did perform a thorough review of Kuriger's ““case file with [her] notes and results.”” *Id.* at 955.

Bance “testified as to the tests Kuriger performed and the procedures and controls Kuriger used, as well as the results of Bance's own independent analysis of Kuriger's data Bance admitted her only knowledge of the tests was from reviewing the paperwork Kuriger generated, conducting a second independent analysis of Kuriger's data, and comparing her analysis of the data with Kuriger's analysis of the same data.” *Id.* at 956. She testified that the defendant's “DNA evidence matched the DNA evidence found on the gun.” *Id.* at 960.

“[Defendant] argues that the tests and conclusions performed by Kuriger are testimonial; therefore Bance could not testify as to these without violating the Confrontation Clause. Bance, however, testified as to her own conclusions and was subject to cross-examination. Although she did not actually perform the tests, she had an independent responsibility to do the peer review. Her testimony concerned her independent conclusions derived from another scientist's test results and did not violate the Confrontation Clause.” *Id.* at 960.

In *United States v. Moon*, 512 F.3d 359 (7th Cir. 2008), one expert testified based on the work of another non-testifying expert. Defendant did not object that the testifying expert had come to an erroneous conclusion from the data. “Any competent chemist would infer from these data that the tested substance was cocaine.” *Id.* at 362. Instead, defendant was concerned “with the readings taken from the instruments.” *Id.* The court of appeals held that “the instruments readouts are not ‘statements’, so it does not matter whether they are ‘testimonial.’” *Id.* The court is correct that the readouts are not statements—at least they are not hearsay statements. Hearsay is limited to statements by persons. E.g., Fenner, *The Hearsay Rule at 15-16* (2d ed.). However, the non-testifying expert is a person and that person wrote those readouts into a report. That written matter is a statement, and in the context of the Moon case it was a testimonial statement. The court is correct insofar as its analysis goes, but its analysis does not go far enough, and its conclusion seems incorrect.

[FN196]. *Moon*, 512 F.3d at 362.

[FN197]. See, e.g., Fenner, *The Hearsay Rule at 429-33* (2d ed.).

[FN198]. Dissenting in *Melendez-Diaz*, Justice Kennedy asks the reader to “[c]onsider how many people play a role in a routine test for the presence of illegal drugs.” He then takes the reader through four different steps, each performed by a different person. *Melendez-Diaz v. Massachusetts*, 557 U.S. ___, ___, 129 S. Ct. 2527, 2544 (2009).

[FN199]. *Melendez-Diaz*, 129 S. Ct. at 2537. Also, requiring such testimony can help assure accurate analysis by forcing the dishonest analyst to reconsider false testimony under oath in an open court. *Id.* Further, “the prospect of confrontation will deter fraudulent analysis in the first place.” *Id.*

[FN200]. *Melendez-Diaz*, 129 S. Ct. at 2537.

[FN201]. *Melendez-Diaz*, 129 S. Ct. 2532 n.1.

[FN202]. *Id.*

[FN203]. See *supra* note 125 and accompanying text.

[FN204]. See *supra* part VI(C).

[FN205]. See *supra* part VI(D).

[FN206]. The efficiency argument is only relevant to constitutional interpretation if it is part of an argument that a particular interpretation of the clause is so inefficient that it cannot be the interpretation the Framers intended. *Melendez-Diaz* puts to rest the argument that the Framers meant to restrict the application of the right in any way based on government efficiencies. *Melendez-Diaz*, *passim*; see, e.g., *id.* at 2540 (“It is not clear whence we would derive the authority to do so. The Confrontation Clause may make the prosecution of criminals more burdensome, but that is equally true of the right to trial by jury and the privilege against self-incrimination. The Confrontation Clause—like those other constitutional provisions—is binding, and we may not disregard it at our convenience.”).

One may argue that we should do away with one rule of evidence or another, perhaps the hearsay rule or the character evidence rules, because they are too inefficient. One may not very well argue that we should do away with the separation of powers, procedural due process, or the prohibition against any one person being “elected to the office of the President more than twice,” U.S. Const. amend. XXII, because these are not efficient ways to run a government. One may not very well argue that we should do away with the right to be free from unreasonable searches and seizures, the right to a trial by jury, or the right to confront witnesses because things would be cheaper and quicker if we did away with them—because more criminals would be behind bars (and more of the innocent as well, but, still, it would be a more efficient way to check more of the guilty into the Graybar Hotel). One may use these arguments to try to change the Constitution but not to override constitutional protection in existence.

In *United States v. Qualls*, the court noted that in complex cases involving a lot of “business records from numerous sources, including foreign entities,” it would be inefficient to have “to call a live witness or to accompany the defendant on a deposition abroad to lay the foundation for the business records of each foreign entity it sought to introduce.” 553 F. Supp. 2d 241, 246 (E.D.N.Y. 2008). This is a policy argument, not a constitutional argument.

[FN207]. “Convenience and efficiency are not the primary objectives—or the hallmarks—of democratic government.” *Bowser v. Synar*, 478 U.S. 714, 736 (1986) (quoting *INS v. Chadha*, 462 U.S. 919, 944 (1983)). “The choices ... made in the Constitutional Convention impose burdens on governmental processes that often seem clumsy, inefficient, even unworkable, but those hard choices were consciously made by men who had lived under a form of government that permitted arbitrary governmental acts to go unchecked.” *Chadha*, 462 U.S. at 959.

This is not a new idea. “[F]or although the unthinking multitude--crying today for this reform, and to-morrow for that; pursuing with hot blood one class of offenders to-day; another, to-morrow--desire oftentimes almost the entire removal of the obstruction of a formal trial and conviction between the offense committed and the punishment following; wise men we, that what serves to impede in some instances the rapidity of the course of justice, in other cases is the protection of innocence in its hour of peril and of anguish. And surely innocence needs protection as truly as guilt merits punishment.” 1 J. Bishop, *Criminal Law* § 23 (2d ed. 1872).

*** SECTIONS OMITTED ***

[FN263]. “We have repeatedly recognized that the commission of a constitutional error at trial alone does not entitle a defendant to automatic reversal. Instead, “most constitutional errors can be harmless.”’ *Washington v. Recuenco*, 548 U.S. 212, 218 (2006) (quoting *Neder v. United States*, 527 U.S. 1, 8 (1999) (quoting *Arizona v. Fulminante*, 499 U.S. 279, 306 (1991))).

[FN264]. *Id.* at 218 (quoting *Neder v. United States*, 527 U.S. 1, 8 (1999) (quoting *Rose v. Clark*, 478 U.S. 570, 579 (1986)).

[FN265]. *Melendez-Diaz*, 129 S. Ct. at 2542 n. 14; *Washington*, 548 U.S. 218; and additional cases cited *infra* note 266.

[FN266]. *Mitchell v. Esparza*, 540 U.S. 12, 17-18 (2003) (“A constitutional error is harmless when it appears beyond a reasonable doubt that the error complained of did not contribute to the verdict obtained.”) (internal quotation marks omitted); *Sullivan v. Louisiana*, 508 U.S. 275, 279 (1993) (the question is “whether the guilty verdict actually rendered in this trial was surely unattributable to the error.”); *Chapman v. California*, 386 U.S. 18, 24 (1967); *State v. Gonzales Flores*, 186 P.3d 1038 (Wash. 2008); *Fields v. United States*, 952 A.2d 859 (D.C. 2008) (applying an “overwhelming evidence” standard).

“[S]ome constitutional errors ... in the setting of a particular case are so unimportant and insignificant that they may, consistent with the Federal Constitution, be deemed harmless.” *Chapman*, 386 U.S. at 22. See also, *Fed. R. Crim. P.* 52(a). It is not that the constitutional rights are “unimportant and insignificant,” but that their impact on the defendant’s conviction is “unimportant and insignificant.” A constitutional error subject to the harmless error rule is called a “trial error.”

Errors in the structure of the trial, cannot be apportioned; their effect on the trial cannot be measured. Structural “error ‘necessarily render[s] a criminal trial fundamentally unfair or an unreliable vehicle for determining guilt or innocence,’” *Washington v. Recuenco*, 548 U.S. 212, 218-19 (2006); accord, e.g., *Rivera v. Illinois*, 556 U.S. ___, ___, 129 S. Ct. 1446, 1455 (2009), and calls for automatic reversal. E.g., *Recuenco*, 548 U.S. at 218; *Sullivan*, 508 U.S. at 279. A constitutional error subject to automatic reversal is called a “structural defect.”

Sixth Amendment structural defects include denying the accused’s right to a public trial, *Waller v. Georgia*, 467 U.S. 39, 49 n.9 (1984), to a trial by jury, *Duncan v. Louisiana*, 391 U.S. 145 (1968), and to be represented by counsel, *United States v. Gonzalez-Lopez*, 548 U.S. 140, 146 (2006); *Gideon v. Wainwright*, 372 U.S. 335 (1963). Other structural defects include using a coerced confession, *Payne v. Arkansas*, 356 U.S. 560 (1958), conducting the trial before a judge or jury that is not impartial, *Gomez v. United States*, 490 U.S. 858, 876 (1989); *Tumey v. Ohio*, 273 U.S. 510 (1927), compelling an accused “to wear identifiable prison clothing at his trial by a jury,” *Carey v. Musladin*, 549 U.S. 70, 75 (2006) (multiple quotation marks and citation omitted), and giving a constitutionally defective reasonable doubt instruction (as the verdict is surely attributable to the reasonable doubt instruction), *Gonzalez-Lopez*, 548 U.S. at 149 (2006); *Sullivan*, 508 U.S. at 279.

These rights are often referred to as fundamental or important rights. In this context, that means they are fundamental or important in terms of their impact on the conviction and, for that reason, a violation calls for automatic reversal.

[FN267]. *Sullivan*, 508 U.S. at 279.

[FN268]. *Chapman*, 386 U.S. at 24.

Certainly error, constitutional error, in illegally admitting highly prejudicial evidence or comments, casts on someone other than the person prejudiced by it a burden to show that it was harmless. It is for that reason that the original common-law harmless-error rule put the burden on the beneficiary of the error either to prove that there was no injury or to suffer a reversal of his erroneously obtained judgment.

Id.

[FN269]. *Plascencia v. Alameida*, 467 F.3d 1190, 1202 (9th Cir. 2006) (exclusion of cumulative cross-examination did not violate the Confrontation Clause and, in any event, any error would have been harmless); *Recuenco*, 548 U.S. at 218 (citing cases); *Schneble v. Florida*, 405 U.S. 427, 430 (1972) (appellant’s codefendant did not take the stand; admission of codefendant’s confession violated the Confrontation Clause; this was harmless constitutional error and does not call for reversal of appellant’s conviction); *Chapman*, 386 U.S. at 24; *United States v. Goldberg*, 538 F.3d 280, 287 (3d Cir. 2008) (The prosecutor violated defendant’s “rights guaranteed by the Confrontation Clause. As a result, we ... will reverse unless the Government proves this misstep was harmless beyond a reasonable doubt.”); *Smith v. State*, 947 A.2d 1131, 1134 (D.C. 2008) (admission of the part of the out-of-court statement that was testimonial violated the Confrontation Clause; that error was harmless the essential information conveyed “had already been disclosed during the first moments of the call when the nontestimonial statements were made”); *Turner v. Commonwealth*, 248 S.W.3d 543, 547 (Ky. 2008) (admission of the statement in question did not violate the defendant’s confrontation right; even if it did, it was harmless error). See also *Melendez-Diaz*, 129 S. Ct. at 2542 n. 14.

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Articles

***1 ANOTHER “STRAIGHTFORWARD APPLICATION”: [FN1] THE IMPACT OF MELENDEZ-DIAZ ON FORENSIC TESTING AND EXPERT TESTIMONY IN CONTROLLED SUBSTANCE CASES**

John Wait [FNa1]

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Introduction

In 1991, Duane Deaver, a Special Agent with the North Carolina State Bureau of Investigation (“SBI”), performed a series of serology tests pertaining to the murder case of *State of North Carolina v. Gregory Flint Taylor*. [FN2] Less sensitive presumptive tests confirmed the possible presence of blood on several areas of Greg Taylor's vehicle; [FN3] however, more sensitive confirmatory tests were negative. [FN4] Mr. Deaver dutifully *2 recorded the results of the tests in his lab notes. [FN5] When he later prepared his final report for trial, the negative test results from the more sensitive tests were omitted. [FN6] Mr. Deaver did not testify at trial, and his report was subject to cross-examination only through the testimony of Agent Donald Pagani, an agent in the City-County Bureau of Identification in Raleigh, North Carolina. [FN7]

Greg Taylor was convicted of first-degree murder on April 4th, 1993. [FN8] Nearly seventeen years later, on February 17th, 2010, Greg Taylor became the first convicted defendant to be exonerated by the North Carolina Innocence Inquiry Commission. [FN9] After Mr. Deaver's actions were brought to the attention of the North Carolina Attorney General's Office, the Attorney General ordered an independent review, which revealed that the SBI Forensic Laboratory may have prepared up to 230 erroneous reports between 1987 and 2003. [FN10] In each of the 230 cases identified by the independent review, discrepancies appeared between the final report prepared for trial and the documented results of the tests or testing analysts' lab notes. [FN11]

The unfolding saga of the SBI, in the wake of Greg Taylor's case, highlights the Sixth Amendment contention urged in this article: Lab *3 analysts conducting forensic tests on controlled substances must be subject to confrontation as a pre-requisite to admitting their test results into evidence, unless a defendant waives his right to confrontation. [FN12] The reasons for this policy will be explained at length in this Article; however, it can poignantly be illustrated by simply pondering whether Mr. Deaver would have more thoroughly translated his lab notes to the final report if he knew that the entirety of his actions could be subject to cross-examination. [FN13] Since 1992, the prosecution has been required to provide defense counsel with lab notes written by the testing analyst under *Brady v. Maryland*. [FN14] Perhaps Mr. Deaver could have simply chosen to manipulate the lab results in other ways if he knew that he would have to testify. However, even assuming that this alternate scenario had occurred in the Taylor case, at least Taylor's defense counsel would have had some opportunity to discover the errors during trial preparation by examining the lab notes if Mr. Deaver's presence had been required at trial - an opportunity that was not available because the substance of the final report was allowed to come into evidence via the testimony of Agent Pagani.

The issue of whether a testing analyst must be subject to confrontation is currently pending review in the United States Supreme *4 Court in *Bullcoming v. New Mexico*. [FN15] Specifically, the issue on review is “[w]hether the Confrontation Clause permits the prosecution to introduce testimonial statements of a nontestifying forensic analyst through the in-court testimony of a supervisor or other person who did not perform or observe the laboratory analysis described in the statements.” [FN16] In *Bullcoming*, the defendant, Donald Bullcoming, sought to exclude expert testimony at trial summarizing a report [FN17] from a gas chromatograph showing that his blood alcohol content was above the legal limit following a car accident. [FN18] The Supreme Court of New Mexico concluded that the analyst transcribing the printout from the gas chromatograph was a “mere scrivener,” [FN19] and because

Bullcoming's "true accuser" [FN20] was the machine itself, Bullcoming's right to confrontation was satisfied by allowing him to cross-examine an expert analyst other than the analyst recording the machine's output. [FN21]

This same issue as to expert testimony based on materials produced by a non-testifying analyst is also up for review in the North Carolina Supreme Court as a result of a series of drug cases decided by the North Carolina Court of Appeals [FN22] following the United States Supreme Court decision in *Melendez-Diaz v. Massachusetts* in 2009. Should the North Carolina Supreme Court grant review, the precise issue will be whether a supervisor of a testing analyst can testify that a particular substance is, in fact, a controlled substance, where the supervisor has conducted a "peer review" of the final report but has not participated in the testing process. [FN23]

***** SECTION OMITTED *****

I. *Melendez-Diaz v. Massachusetts*

In 2001, police officers outside of a Kmart in Boston, Massachusetts, waited for their suspect, Thomas Wright, to appear at the front store entrance. [FN26] The manager of the Kmart had reported to the *6 police that Wright, a Kmart human resource employee, had been engaging in suspicious activity. [FN27] The manager said that on several occasions he had observed Wright receive external phone calls, walk to the front door, climb into a blue Mercury Sable, leave the parking lot with one or two other passengers in the car, and return to the store approximately ten minutes later. [FN28]

The officers watched Wright come out through the front door of the Kmart, and after several minutes, walk back inside. [FN29] A blue Mercury Sable then pulled to the front of the building, and Wright reappeared and entered the backseat of the car. [FN30] Wright was stopped by an officer after he exited the Mercury and started to head back toward the store. [FN31] Upon being stopped, Wright informed the officer that he was carrying four bags of cocaine in his pocket. [FN32] After seizing the cocaine, the officer immediately instructed other law enforcement personnel to arrest the men in the blue Mercury Sable. [FN33] Ellis Montero was driving and Luis Melendez-Diaz was in the passenger seat. [FN34]

Montero, Melendez-Diaz, and Wright were all placed in the backseat of a cruiser and transported to the police station. [FN35] As the men proceeded through the booking process, an officer returned to the parked cruiser in order to examine the backseat, because Montero and Melendez-Diaz had been talking and moving in an animated fashion during the ride. [FN36] In the backseat of the transporting cruiser, the officer found nineteen small plastic bags of cocaine totaling 22.16 grams. [FN37]

Luis Melendez-Diaz was charged and convicted of distributing and trafficking cocaine under Massachusetts's General Statutes. [FN38] At trial, his defense counsel argued that Melendez-Diaz was denied his right under the Sixth Amendment to confront the witnesses against him. This argument relied on the fact that several "certificates of analysis" were admitted into evidence, certifying that the bagged white powder from *7 the back of the cruiser was, in fact, cocaine. [FN39] These "certificates of analysis" were prepared by forensic analysts not present at trial. The trial court disagreed with defense counsel, and when Melendez-Diaz raised his Sixth Amendment argument again on appeal to the Appeals Court of Massachusetts, the Court dismissed his argument in a footnote in an unpublished decision. [FN40]

The United States Supreme Court granted Melendez-Diaz's petition for writ of certiorari, [FN41] after review was denied by the Supreme Judicial Court of Massachusetts. [FN42] The issue presented to the Supreme Court was whether the "certificates of analysis" were admissible to show that the seized substances were, in fact, cocaine under the Sixth Amendment. [FN43] In writing for the majority, Justice Scalia offered what he coined to be a "rather straightforward application" [FN44] of the Supreme Court's holding in *Crawford v. Washington* [FN45] through the following three step analysis: (1) Reports prepared by the forensic analysts while testing confiscated substances were testimonial, because the reports contained statements "for the purpose of establishing or proving some fact[.]" [FN46] (2) Given the testimonial nature of the reports, the analysts were "witnesses" under the Sixth Amendment; [FN47] and (3) Because the analysts were giving testimony and acting as witnesses through their reports, then "[a]bsent a showing that the analysts were unavailable to testify at trial and that [the criminal defendant] had a prior

opportunity to cross-examine them, [the criminal defendant] was entitled to ‘be confronted with’ the analysts at trial.” [FN48]

By allowing its holding in *Crawford* to do the heavy lifting, the Supreme Court reached this conclusion in approximately four pages. The Court then spent the remainder of the majority opinion addressing a host of arguments and concerns raised by the State of Massachusetts and the dissenting justices. In its response, the majority established the following principles germane to the issue addressed in this Article.

*8 A. Guiding Principles in *Melendez-Diaz*

1. All “accusatory” witnesses must be available for cross-examination, and a testing analyst is an “accusatory” witness under the Sixth Amendment [FN49]

Since the Court had already reached the conclusion that a testing analyst is a testimonial witness under *Crawford*, the Court had little more to do than restate the plain wording of the Sixth Amendment in its rationale: “The Sixth Amendment guarantees a defendant the right ‘to be confronted with the witnesses against him.’” [FN50] Because the analysts were witnesses against the defendant, the Court reasoned that the defendant had the right to confront the analyst. The Court explained that the Sixth Amendment contemplates two types of witnesses in a criminal trial: “those against the defendant and those in his favor.” [FN51] To meet its burden of proof, the Court observed that the prosecution “must produce” accusatory witnesses. [FN52] Conversely, a defendant may or may not call witnesses in his favor. [FN53] The Court declined to follow the approach suggested by the State of Massachusetts to recognize a third category of witnesses comprised of persons helpful to the prosecution, but not subject to confrontation. [FN54] In rejecting several cases cited by the State of Massachusetts, the Court stated that the State had “fail[ed] to cite a single case in which [adverse] testimony was admitted absent a defendant’s opportunity to cross-examine.” [FN55]

2. Testing analysts are conventional witnesses of the sort at issue in *Sir Walter Raleigh’s* case [FN56]

In *Crawford v. Washington*, the Supreme Court discussed *Raleigh’s* case during its review of the common law evolution of confrontation in criminal trials. [FN57] *Raleigh* was accused of treason in 1603 after being implicated by his alleged accomplice, Lord Cobham, in a transcribed *9 pre-trial examination and in a letter. [FN58] At trial, *Raleigh* demanded that he be afforded the right to confront Cobham, because he believed that Cobham lied to save himself. [FN59] The judges denied *Raleigh’s* request, and *Raleigh* was convicted and sentenced to death after a written copy of the pre-trial examination and the letter were admitted into evidence. [FN60]

The Supreme Court revisited *Raleigh’s* case in *Melendez-Diaz* in response to the dissenting justices’ attempt to distinguish the role of a testing analyst from *ex parte* witnesses such as Cobham. [FN61] In writing for the dissenting justices, Justice Kennedy argued that a lab analyst was not a conventional witness because: (1) a conventional witness recalls past events, while a testing analyst records near-contemporaneous results from tests; [FN62] (2) a testing analyst does not actually witness the crime, and he or she has no involvement with any “human action related to it[;]” [FN63] and (3) a conventional witness responds to interrogation, whereas, a testing analyst merely follows scientific protocol. [FN64]

The majority rejected each of these contentions by responding: (1) the “certificates of analysis” did not contain near-contemporaneous test results, because the certificates were prepared almost a week after the tests were performed; [FN65] (2) the temporal connection between the tests and the documentation of the results was not relevant to the issue of whether the analyst should be subject to confrontation, because even if the final lab report was prepared contemporaneously, the analyst would still be subject to confrontation due to the testimonial content in the final report; [FN66] (3) no legal authority supported the proposition that conventional witnesses are only those persons who actually witness the crime; [FN67] and (4) no distinction exists between those witnesses offering evidence against a defendant during an interrogation and those offering evidence voluntarily. [FN68] The majority further noted that if the Sixth Amendment applies to an affidavit prepared in response to an officer’s *10 request to “write down what happened,” [FN69] then affidavits prepared by a testing analyst should be subject to confrontation as well. [FN70]

3. The right to confrontation is a procedural right which can be used to expose both incompetency and fraud. As a result, there is no meaningful distinction between testimony that recalls past events and testimony founded on scientific testing, because both types of evidence are subject to the same procedural guarantee under the Sixth Amendment [FN71]

The majority viewed the dissenting justices' distinction between scientific testimony and testimony recalling past events as “little more than an invitation to return to our over-ruled decision in *Roberts*, [FN72] which held that evidence with ‘particularized guarantees of trustworthiness’ was admissible notwithstanding the Confrontation Clause.” [FN73] The Court reiterated its reasoning in *Crawford* that the right to confrontation under the Sixth Amendment is a procedural guarantee; [FN74] and that the ultimate goal of the Confrontation Clause is not to ensure reliability, even though reliable evidence as an end result is certainly desirable. [FN75] The majority also rejected the dissenting justices' contention that scientific testing is neutral and reliable by noting the following deficiencies: (1) a majority of forensic laboratories are managed by law enforcement agencies, and an analyst under such control may have an incentive to sacrifice protocol based on science in favor of efficiency or expediency; [FN76] and (2) confrontation may be able to “weed out” an analyst committing fraud or an analyst conducting tests without the proper training or expertise. [FN77] The Court also noted that scientific tests on controlled substances, even if they are performed by an honest and competent analyst, are vulnerable to a degree of subjectivity which confrontation could be used to explore. [FN78]

*11 4. Sworn lab reports prepared for trial “do not qualify as traditional official or business records [under the federal hearsay rules], and even if they did, their authors would be subject to confrontation nonetheless” [FN79]

Given that the “certificates of analysis” were prepared for trial, the Court relied on its holding in *Palmer v. Hoffman* [FN80] to reach its conclusion that the certificates did not qualify as business records. [FN81] In *Palmer*, an accident report prepared by a railroad company was held inadmissible as a business record because the report was prepared in anticipation of litigation, rather than in the regular course of business. [FN82] The majority reasoned that the certificates were more like police reports than business records, and therefore, the certificates failed to qualify as either public records [FN83] or business records [FN84] under Rule 803 of the Federal Rules of Evidence. [FN85]

More importantly, the Court held that if a document contains testimonial hearsay, then its admission into evidence cannot be supported merely by a hearsay exception in the Rules of Evidence. [FN86] Instead, when a document contains testimonial hearsay, its author must be subject to confrontation. [FN87] The dissent attempted to analogize the “certificates of analysis” to a clerk's authentication of an official record at common law, which was admissible without cross-examination. [FN88] In response, the majority observed that the clerk's ability to authenticate was “narrowly circumscribed [;]” [FN89] and that the clerk was permitted only “‘to certify to the correctness of a copy of a record kept in his office,’ but had ‘no authority to furnish, as evidence for the trial of a lawsuit, his interpretation of what the record contains or shows, or to certify to its substance or effect.’” [FN90] In situations where the clerk had to provide a *12 document with substantive evidence against the accused, the majority observed that the clerk was subject to confrontation. [FN91]

5. A defendant's ability to subpoena a witness is not a substitute for confrontation [FN92]

In this section, the Court returned to the prosecution's burden by rejecting a subpoena as a substitute for confrontation. The majority noted that a subpoena is a privilege offered to the defendant, and in situations where the witness does not appear a defendant has little recourse. [FN93] Because the lab analysts preparing the “certificates of analysis” were adverse witnesses, the majority viewed the appropriate analysis to be through the Confrontation Clause rather than the Compulsory Process Clause. [FN94]

6. The requirements of the Confrontation Clause will not be relaxed to accommodate fears that the current criminal justice system will not be able to adjust [FN95]

The majority flatly rejected the dissent's “floodgate” argument. The majority opinion characterized the dissent's

estimation, of the number of trials at which an analyst may have to testify, as “back-of-the-envelope calculations.” [FN96] The majority listed ten jurisdictions that had already adopted similar rules to those announced in Melendez-Diaz, and claimed that “there is no evidence that the criminal justice system has ground to a halt in the States that, one way or another, empower a defendant to insist upon the analyst's appearance at trial.” [FN97]

B. The rule from Melendez-Diaz going forward

It is apparent that the majority in Melendez-Diaz had little concern for the practicalities of the adversarial system that initially led to the procedure surrounding the “certificates of analysis.” The Court showed no concern for a potential overload of the system, refused to accept an alternate mode of confrontation by rejecting a subpoena as a substitute, and cast a wary eye toward the touted reliability of scientific analysis. As *13 shown by the first four pages of the opinion, the Court's position contained no hint of nuance as it returned to the same theme throughout its response to the State of Massachusetts and the dissent: The Sixth Amendment requires that accusatory witnesses be subject to confrontation, and lab analysts conducting scientific tests on controlled substances are accusatory witnesses when they provide the prosecution with testimonial evidence against a defendant. [FN98]

***** SECTIONS OMITTED *****

II. Testing Seized Substances

A. North Carolina's Approach

In Melendez-Diaz, no expert testimony was admitted at trial concerning the nature and quantity of the seized substances in the back of the police cruiser. As a result, the majority had no occasion to address in its opinion whether a lab analyst's superior, after conducting a *16 supervisory review, could testify concerning the contents of a final report prepared for trial where the superior did not conduct, or assist with, the subject tests. [FN119] However, the rule from Melendez-Diaz and the issue presented in Bullcoming point to the precise constitutional question presented when a testifying expert bases his or her testimony on a non-testifying analyst's report. The issue is whether the defendant is confronting the witness providing testimony against him by cross-examining the testifying expert. [FN120] If the United States and North Carolina Supreme Courts answer the question in the affirmative, then a defendant's right to confrontation under the Sixth Amendment is satisfied by cross-examining the supervisor, instead of the testing analyst. If the Courts reach the contrary conclusion, then the final report falls within the holding of Melendez-Diaz, and the testing analyst must be available for cross-examination for the final report to be admitted into evidence.

The first step to resolving this issue must necessarily begin with the duties of a forensic analyst testing a seized substance. When a seized substance is sent to the North Carolina SBI Forensic Laboratory from the property control section of a police department, the substance is received by an evidence technician and assigned a file number. [FN121] The evidence technician places the substance in a vault, and when the substance is scheduled to be tested, it is pulled from the vault and assigned to a lab analyst. [FN122] Once the lab analyst has possession of the substance, it remains locked in his or her laboratory until the tests are performed on the substance. [FN123] In Brewington, SBI Special Agent Kathleen Schell offered the following layman's explanation of the *17 procedures and tests conducted in analyzing the suspected crack cocaine in the case:

Q. Agent Schell, can you describe when an item comes into the laboratory that's suspected to be, for example cocaine, can you describe how that is tested?

A. When the items of evidence come into the lab they are assigned a unique laboratory case number which follows that piece of evidence throughout the entire time it's at the lab. When the time comes for an analyst to actually analyze the piece of evidence, that evidence is in the care and control specifically of that analyst. When the evidence becomes available for analysis the chemist will open up the piece of evidence, take all the packaging out of it, they will weigh that piece of evidence and perform a series of preliminary and more specific instrumental tests in order to come to a conclusion about the identity of that substance.

Q. Can you describe what those tests are?

A. In this case specifically?

Q. Yes, ma'am.

A. [There] were three preliminary tests, which were inclusive of two color tests and a crystal test, as well as a more specific instrumental test, which identified the substance.

Q. Can you describe how the color tests are done?

A. The color tests that were used, the first one was Marquis color test, and the color test, basically you take a little bit of the color test solution; it's just a liquid, you put it into a spot plate well or like a little cup, and a little piece of the sample is placed into that, and you are looking for any type of color change or lack of color change, and based upon those colors that either are or are not produced, it allows the chemist to focus their direction and analysis one particular way or another.

....

Q. And you said there was also a crystal test?

A. Yes, ma'am.

Q. Can you describe how that's done?

A. A little piece of the sample, in this case the offwhite hard material, was placed on a slide, and then a liquid is added to that and they're mixed together. In the case of cocaine specific cross shaped crystals will form, and you can view those crystals using a microscope.

....

Q. And then there's an instrumental test?

*18 A. Yes, ma'am.

Q. Can you describe that test?

A. During the instrumental test another piece of the sample is placed onto an instrument, a beam of light is shown through the sample, and based upon the amount of light that is reflected off that sample a graph is produced and we can look at that graph and compare it to graphs of known standards of controlled substances and make a comparison in order to identify the substance.

....

A. Yes, ma'am. Can I say one thing? After that specific instrumental test, the chemist did a method to clean up the cocaine base that was mixed with the bicarb which took the bicarb out of the cocaine base in order to produce a clean graph of the cocaine base. [FN124]

Once the tests are performed at the SBI, the results are recorded by the lab analyst in a computer database, [FN125] and the data can no longer be modified. [FN126] Information stored in the database is capable of being viewed by other analysts. [FN127] In nearly every case, the lab analyst's work on file is reviewed by another analyst. [FN128] The purpose of the second analyst's "peer review" is to determine whether "the reviewer would have come to the same conclusions as the actual analyst" based on the raw data recorded by the first analyst. [FN129] If the reviewer believes that the first analyst's results are satisfactory, then the file is approved and released. [FN130] Unsatisfactory files are returned to the original analyst for further testing. [FN131] After a testing analyst has completed his or her tests and the *19 results have been recorded, the testing analyst prepares a final report describing the nature and quantity of the seized substance. [FN132]

In the arena of forensic chemistry, there exists a plethora of preliminary and confirmatory tests available to a lab analyst to test a suspected controlled substance. The types of tests performed vary from case to case and jurisdiction to jurisdiction depending on the technology offered and internal lab procedures. Some preliminary tests, sometimes called "nonspecific tests," [FN133] include biological testing, [FN134] morphological tests, [FN135] color tests, [FN136] microcrystal tests, [FN137] chromatography, [FN138] *20 immunoassay, [FN139] ultraviolet spectrophotometry, [FN140] and fluorescence analysis. [FN141] These tests are nonspecific for two reasons: (1) their inability to consistently identify a specific substance [FN142] and (2) their tendency to create false positive results. [FN143] Confirmatory, or "specific," tests include infrared spectrophotometry, [FN144] nuclear magnetic resonance, [FN145] gas chromatography/mass spectrometry, [FN146] and the mixed melting point test. [FN147] The machines running these tests produce very few false positive results [FN148] and some can offer a readout that offers the specific identity of the compound being tested. [FN149]

In Melendez-Diaz, the confirmatory test used to conclude that the seized substances were cocaine in the "certificates of analysis" was a gas chromatography/mass spectrometry test ("GC/MS"). [FN150] GC/MS machines are extremely accurate and are considered the "gold standard for forensic testing." [FN151] The test is time-consuming and only one sample can be *21 analyzed at a time. [FN152] Due to the complexity of the computer equipment and the nature of the data produced, an operator using a GC/MS machine needs years of technical

training and experience to properly use the machine and reach a conclusion as to the substance being tested. [FN153] However, even when operators do possess these qualifications, the results can be subject to human error. [FN154]

The confirmatory test used in Brewington was infrared spectrophotometry, [FN155] and Special Agent Schell's testimony appears to indicate that the machine did not produce a computer readout identifying the specific substance. [FN156] Instead, the testing analyst, Agent Nancy Gregory, read the graphical data from the machine and compared it to graphs of known controlled substances. [FN157] In Brennan, an infrared spectrophotometer was also used for the confirmatory test. [FN158] However, unlike the machine used in Brewington by the SBI, it appears that the infrared spectrophotometer at the CMPD's office produced a readout identifying the tested substance as cocaine. [FN159]

The machine used in Bullcoming was a gas chromatograph, [FN160] which is generally considered a nonspecific test. [FN161] Even though it is a nonspecific test, it is widely used to analyze bodily fluids to compute blood alcohol content. [FN162] This is due to the machine's exceptional ability to separate components of a complex substance, [FN163] making it easier for an operator to identify ethanol from other types of alcohol potentially present in a sample. [FN164] Notwithstanding the convenience of a gas chromatograph, however, human error is possible both at the collection and testing stages of the sample. [FN165]

***22 B. Who should be subject to confrontation under Melendez-Diaz?**

Why did the testing analysts need to be subject to confrontation in Melendez-Diaz? The answer, as precedent is concerned, is simply that the testing analysts were creating testimonial evidence by preparing the “certificates of analysis.” [FN166] While there was much discussion during oral argument regarding what, exactly, the defense bar would want to ask the analyst, [FN167] the precedential portion opinion declined to specify why the analysts needed to be cross-examined outside of the procedural guarantee of the Confrontation Clause. [FN168] In the dictum portion of the opinion, the majority indicated that cross-examination could be used to explore the “analysts' honesty, proficiency, and methodology.” [FN169] The Court will now have to revisit this issue, because it lies at the heart of Bullcoming, Brennan, and Brewington. If “honesty, proficiency, and methodology” are the crucial subjects for cross-examination, only the testing analyst will suffice. If these characteristics are secondary to a conclusion regarding the nature and quantity of a substance, then an expert basing their opinion on raw data will satisfy the Confrontation Clause.

As discussed, both preliminary and confirmatory tests can be tainted by human error. Preliminary tests are susceptible to misperceptions and inaccurate readings, and if performed improperly, they can lead to inaccuracies in the confirmatory tests. Confirmatory tests are also subject to a degree of error. Lab analysts conducting these procedures must have years of training and experience, and in circumstances where the machine fails to provide a definitive answer, the analyst must take the raw data and compare it to known drugs to conclude whether a compound is a controlled substance. However, even if the machine does not specify the presence of a particular controlled substance, the analyst must have the training and experience to work the machine properly.

The methodology and sequence of the techniques described by Special Agent Schell in Brewington surpassed most recommended industry standards. [FN170] Yet, no matter how many tests are performed and ***23** regardless of how precisely tuned a machine is, a correct result in a forensic analysis depends on the competency of the analyst using the machine. [FN171] The goal of a competent analyst is to eliminate the “uncertainty” [FN172] inherent during every stage of the testing process. [FN173] Thus, the more competent the analyst, the better the analyst will be at finding results with certainty.

If this is the testing analyst's role, however, then what is achieved by examining a supervisor or peer conducting a “peer review?” In the SBI, by the time that the “peer review” is conducted, all the “uncertainty” during the testing process has presumably been removed. Assume Agent Pagani had been Mr. Deaver's reviewer in the Taylor case. If Agent Pagani conducted his review merely by examining documents stored on a computer database, how would Agent Pagani have known that Mr. Deaver had truly eliminated all “uncertainty” during the testing process? Mr. Deaver omitted negative test results from his final report. Had Mr. Deaver intended to hide these results, how could

Agent Pagani have discovered it? Undoubtedly, the “peer review” is also part of the process of removing uncertainty; [FN174] however, as the Taylor case shows, such reviews are limited in their ability to detect some types of omissions.

These questions are more than just concerns with the deficiencies inherent in the “peer reviews” and testimony given by experts based on data compiled by a testing analyst. Instead, under *Melendez-Diaz*, it points to an important moment with respect to the constitutional issue presented. The moment the testing analyst takes a sample, places it into the machine, and begins to generate results, the testing analyst is producing testimonial hearsay. As the Supreme Court held in *Crawford*, including Justice Thomas, testimonial statements include “pretrial statements that declarants would reasonably expect to be used prosecutorially.” [FN175] The machine prints the result or raw data, but when the testing analyst submits that result or raw data to a database knowing it will eventually go to the prosecution, the testing analyst is giving testimony that he or she competently and honestly performed the test *24 producing the result or raw data. Under *Melendez-Diaz*, therefore, the testing analyst must always be subject to confrontation in order for test results to be submitted in controlled substance cases, because the data produced by a machine becomes testimonial hearsay from the analyst.

It follows under this view that the testimony of a non-testing expert can never suffice in and of itself. There may be situations where both the testing analyst's documents and the testifying expert's testimony are both testimonial and therefore subject to *Crawford*. In these situations, the testing analyst would submit materials showing that he or she performed tests on a particular sample, which produced raw data; and the testifying expert could use that raw data to form his or her own opinion as to whether the tested substance is a controlled substance. Each could testify at trial as to his or her portion of the testimonial evidence presented. Yet, even in these circumstances, the prosecution would have to offer the testing analyst to confirm that the raw data was, indeed, procured from: (1) the actual sample at issue in the case; (2) by a method of testing in accordance with industry standards; and (3) performed with an acceptable degree of competence. This would have to be established prior to another expert, other than the testing analyst, using the raw data to give testimony concerning the nature of a seized substance.

As will be discussed more fully below, this position has forcefully been rejected in at least some jurisdictions. [FN176] Yet, it represents what another “straightforward application” of *Crawford* would entail in situations where either the raw data or substantive conclusion of a forensic report is admitted into evidence through the testimony of an expert other than the testing analyst. Moreover, it is the only policy capable of presenting defense counsel with the ability to catch discrepancies in the testing process such as those committed by Mr. Deaver in Greg Taylor's case.

***** SECTIONS OMITTED *****

V. Conclusion

The immediate fallout from *Melendez-Diaz* burdened prosecutors across the country with scheduling conflicts. With analysts moving to different states, going on maternity leave, becoming sick, or going to court to testify, the obligation to schedule the testing analyst became instantly overwhelming. [FN231] These conflicts naturally led to increased costs in prosecuting drug-related cases in many states. [FN232] State legislators and prosecutors scrambled in response to find logistical solutions to the seemingly never-ending requests of defendants to confront the testing analyst - including notice and demand statutes [FN233] and video-conferencing. [FN234]

The United States Supreme Court showed little emotion over these practicalities in *Melendez-Diaz*, and rightly so. Constitutional guarantees rarely, if ever, result in convenience when implemented. If police officers could search everyone without cause, a lot more crime could be *38 discovered. If defendants were not guaranteed counsel, prosecutions around the country could achieve more convictions. If juries were no longer required, the State could save money and more people could watch TV at home.

Following *Melendez-Diaz*, few commentators have had the audacity to outright state that the precedent is too hard to put into practice. Indeed, as the above hypotheticals indicate, such a claim would be silly. Instead, this

attitude has taken other forms. “The machines provide the statement, so there is no witness” - as if the sample placed itself into the machine without the assistance of a highly skilled and trained individual running the equipment. “The testifying expert reviewed the data and results, and he or she came to their own conclusion” - as if the testifying expert was not relying on the assertions made by the testing analyst to reach their opinion. “The defendant can call the testing analyst by subpoena if he really wants [to] cross-examine him or her” - as if it is the defendant's burden to call someone whose role is to establish an element of the crime alleged.

These claims are merely excuses and justifications to maintain the status quo, and they should be treated as such. Despite all claims to the contrary, the issue presented in *Bullcoming*, *Brennan*, and *Brewington* is just as “straightforward” as the issue presented in *Melendez-Diaz*. [FN235] While this application of *Crawford* is not easy, it is nevertheless crucial to the integrity of our judicial system as the advancement of technology continues to improve our ability to prosecute crimes. [FN236] To safeguard against the types of abuse apparent in *Mr. Deaver's* case, the testing analyst must be subject to confrontation before allowing the admission of test results into evidence either directly or through a testifying expert. Even if the United States Supreme Court holds that the expert testimony in *Bullcoming* was admissible under the Sixth Amendment, North Carolina should provide additional constitutional protection by affirming the dispositions in *Brennan* and *Brewington*. [FN237]

[FN1]. *Melendez-Diaz v. Massachusetts*, 129 S. Ct. 2527, 2533 (2009).

[FN1a]. Attorney, Wait Law, P.L.L.C., High Point, North Carolina, [http:// www.wait-law.com](http://www.wait-law.com). I would like to sincerely thank the editors and staff at the Campbell Law Review for the opportunity to write this Article and for their editorial assistance.

[FN2]. Chris Swecker & Michael Wolf, An Independent Review of the SBI Forensic Laboratory, at 5-6 (released Aug. 18, 2010), <http://ncdoj.gov/getdoc/0a92ee81-0667-4935-b2d3-221d4f586c61/Independent-Review-of-SBI-Forensic-LAB.aspx>; see also Transcript of Evidence at 140, *State v. Taylor*, Nos. 91-CRS-71728, 92-CRS-30701 (Apr. 4, 1993) (mentioning Jeff Taub, another forensic serologist, as a testing analyst in the final report). Mr. Taub is not mentioned in connection to Greg Taylor's case in the independent review published by Mr. Swecker and Mr. Wolf.

[FN3]. Agent Donald Pagani testified that he also performed a presumptive test in the field (a phenolphthalein test) on the vehicle prior to collecting and sending the remaining portion of the substances and vehicle parts to the SBI for further testing. Transcript of Evidence at 135-36, *Taylor*, Nos. 91-CRS-71728, 92-CRS-30701. The exhibits sent by Agent Pagani were later analyzed by Mr. Deaver. *Id.* at 140.

[FN4]. Swecker & Wolf, *supra* note 2, at 6-7.

[FN5]. *Id.* at 6.

[FN6]. *Id.*

[FN7]. *Id.* at 5-6; Transcript of Evidence at 66, *Taylor*, Nos. 91-CRS-71728, 92-CRS-30701. The relevant excerpts of Agent Pagani's testimony in connection with the final report prepared by Mr. Deaver appear in the trial transcript as follows:

Q. All right. As to the presence of blood in item 16, the automobile fender liner, what did these serologists report to you?

A. Examination of item 16 gave chemical indications for the presence of blood.

....

Q. All right. So the, the stained thread from the A-frame didn't reveal the presence of blood?

A. That's correct.

Q. But the stained thread from the fender edge did reveal the presence of blood, number 18?

A. That is correct.

Id. at 145-46. According to the final report prepared by Mr. Deaver, one other sample, taken from the victim's pants, failed to reveal the presence of blood. *Id.* at 147. The examination of Agent Pagani at trial concerning the victim's pants was similar to the above-quoted testimony. See *id.*

[FN8]. *State v. Taylor*, 447 S.E.2d 360, 362 (N.C. 1994).

[FN9]. Swecker & Wolf, *supra* note 2, at 5.

[FN10]. *Id.* at 5, 9. Mr. Taub is mentioned in connection with at least two suspected cases in the review, not including Greg Taylor's case. *Id.* at 19.

[FN11]. *Id.* at 10-11.

[FN12]. After the Supreme Court's decision in *Melendez-Diaz*, the North Carolina General Assembly amended several notice and demand statutes relating to forensic reports. 2009 N.C. Sess. Laws 473. In most cases, the prosecution must give a defendant fifteen days' notice that a forensic report will be submitted in a proceeding. See *id.* If a defendant does not offer a written objection, then the forensic report can be admitted to establish its substantive allegations without the testimony of the analyst. See *id.* The Supreme Court indicated in *Melendez-Diaz* that such waiver provisions would pass Sixth Amendment scrutiny. *Melendez-Diaz v. Massachusetts*, 129 S. Ct. 2527, 2534 n. 3 (2009) (“The right to confrontation may, of course, be waived, including by failure to object to the offending evidence; and States may adopt procedural rules governing the exercise of such objections.”).

[FN13]. Interview by Raleigh News and Observer with Jeff Taub, former forensic serologist, SBI, in Raleigh, NC (Aug. 27, 2010). Following the publication of the review, Mr. Taub stated in an interview that the reporting methods now under investigation were misunderstood by the defense counsel in each case. He claimed that these “misunderstandings” could have been avoided had he been called to testify at trial. *Id.*

[FN14]. *Brady v. Maryland*, 373 U.S. 83 (1963). See also *State v. Cunningham*, 423 S.E.2d 802 (N.C. App. 1992). This rule is now codified in North Carolina's General Statutes. N.C. Gen. Stat. § 15A-903(a)(1) (2009). On defendant's motion, the State must “[m]ake available to the defendant the complete files of all law enforcement and prosecutorial agencies The term ‘file’ includes the ... investigating officers' notes, results of tests and examinations, or any other matter or evidence obtained during the investigation of the offenses alleged to have been committed by the defendant.” *Id.*

[FN15]. *Bullcoming v. New Mexico*, 226 P.3d 1 (N.M. 2010), cert. granted, No. 09-10876, 2010 WL 2008002, at *1 (U.S. Sept. 28, 2010).

[FN16]. *Bullcoming*, 2010 WL 2008002, at *1.

[FN17]. The gas chromatograph printed the results of the test, and then the printout was transcribed by the testing analyst to the final report admitted at trial. Bullcoming, 226 P.3d at 6.

[FN18]. Id. at 4.

[FN19]. Id. at 9.

[FN20]. Id.

[FN21]. Id. at 9-10.

[FN22]. See *State v. Brennan*, 692 S.E.2d 427 (N.C. App. 2010), temporary stay allowed, 698 S.E.2d 72 (N.C. May 21, 2010); *State v. Brewington*, 693 S.E.2d 182 (N.C. App. 2010), temporary stay allowed, 698 S.E.2d 73 (N.C. Jun. 4, 2010).

[FN23]. *Brewington*, 693 S.E.2d at 184; *Brennan*, 692 S.E.2d at 428.

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[FN26]. *Commonwealth v. Melendez-Diaz*, No. 05-P-1213, 2007 WL 2189152, at *1 (Mass. App. Ct. Jul. 31, 2007).

[FN27]. Id.

[FN28]. Id.

[FN29]. Id.

[FN30]. Id.

[FN31]. Id.

[FN32]. Id. at *2.

[FN33]. Id.

[FN34]. Id.

[FN35]. Id.

[FN36]. Id.

[FN37]. Id.

[FN38]. *Melendez-Diaz v. Massachusetts*, 129 S. Ct. 2527, 2530 (2009).

[FN39]. Id.

[FN40]. *Melendez-Diaz*, 2007 WL 2189152, at *1, *4.

[FN41]. *Melendez-Diaz v. Massachusetts*, 552 U.S. 1256 (2008).

[FN42]. *Commonwealth v. Melendez-Diaz*, 874 N.E.2d 407 (Mass. 2007).

[FN43]. *Melendez-Diaz*, 129 S. Ct. at 2530.

[FN44]. Id. at 2533.

[FN45]. *Crawford v. Washington*, 541 U.S. 36 (2004).

[FN46]. *Melendez-Diaz*, 129 S. Ct. at 2532 (quoting *Crawford*, 541 U.S. at 71) (quotation marks omitted).

[FN47]. *Crawford*, 541 U.S. at 36.

[FN48]. *Melendez-Diaz*, 129 S. Ct. at 2352 (quoting *Crawford*, 541 U.S. at 54).

[FN49]. Id. at 2533.

[FN50]. Id. (quoting U.S. Const. Amend. VI).

[FN51]. Id. at 2534.

[FN52]. Id.

[FN53]. Id.

[FN54]. Id.

[FN55]. Id.

[FN56]. Id. at 2534.

[FN57]. *Crawford v. Washington*, 541 U.S. 36 (2004).

[FN58]. Id.

[FN59]. Id.

[FN60]. Id.

[FN61]. *Melendez-Diaz*, 129 S. Ct. at 2534.

[FN62]. Id. at 2551.

[FN63]. Id. at 2552.

[FN64]. Id.

[FN65]. Id. at 2535.

[FN66]. Id.

[FN67]. Id.

[FN68]. Id.

[FN69]. See *Davis v. Washington*, 547 U.S. 813 (2006).

[FN70]. *Melendez-Diaz*, 129 S. Ct. at 2535.

[FN71]. Id. at 2536-37.

[FN72]. *Ohio v. Roberts*, 448 U.S. 56 (1980).

[FN73]. *Melendez-Diaz*, 129 S. Ct. at 2536 (citation omitted).

[FN74]. Id.

[FN75]. *Crawford v. Washington*, 541 U.S. 36, 61-62 (2004).

[FN76]. *Melendez-Diaz*, 129 S. Ct. at 2536.

[FN77]. Id. at 2536-37.

[FN78]. Id. at 2537-38.

[FN79]. Id. at 2538.

[FN80]. *Palmer v. Hoffman*, 318 U.S. 109 (1943).

[FN81]. *Melendez-Diaz*, 129 S. Ct. at 2538.

[FN82]. *Palmer*, 318 U.S. at 113-14.

[FN83]. Fed. R. Evid. 803(8).

[FN84]. Fed. R. Evid. 803(6).

[FN85]. *Melendez-Diaz*, 129 S. Ct. at 2538.

[FN86]. Id. at 2539-40.
[FN87]. Id.
[FN88]. Id. at 2538-39.
[FN89]. Id. at 2538.
[FN90]. Id. (quoting *State v. Wilson*, 75 So. 95, 97 (La. 1917)).
[FN91]. Id. at 2539.
[FN92]. Id. at 2540.
[FN93]. Id.
[FN94]. Id.
[FN95]. Id.
[FN96]. Id. at 2540 n. 10.
[FN97]. Id. at 2541.
[FN98]. Id. at 2542 (“This case involves little more than the application of our holding in *Crawford*. The Sixth Amendment does not permit the prosecution to prove its case via *ex parte* out-of-court affidavits, and the admission of such evidence against *Melendez-Diaz* was error.”) (footnotes and citations omitted).
*** SECTIONS OMITTED ***
[FN119]. The Supreme Court did, however, engage in a discussion of this issue at the oral argument in *Melendez-Diaz*. Transcript of Oral Argument at 4-5, 27-28, *Melendez-Diaz v. Massachusetts*, 129 S. Ct. 2527 (2008) (No. 07-591).
[FN120]. Counsel for the petitioner in *Melendez-Diaz* contended that a supervisor’s testimony would not violate the Confrontation Clause if the supervisor’s testimony was merely based on the raw data of the tests conducted. Id. at 28.
[FN121]. Transcript at 73-74, *State v. Brennan*, 692 S.E.2d 427 (N.C. Ct. App. 2010) (No. 08-CRS-954). Substances sent to the Charlotte-Mecklenburg Police Department (“CMPD”) Crime Laboratory are sent directly to the chemistry section for initial identification. Transcript of Jury Trial Vol. II at 250, *State v. Galindo*, 683 S.E.2d 785 (N.C. Ct. App. 2009) (No. 07-CRS-238968-69).
[FN122]. Transcript at 78, *Brennan*, 692 S.E.2d 427 (No. 08-CRS-954). The CMPD lab has a similar secured holding area. Trial Transcript Vol. II at 120, *State v. Hough*, 690 S.E.2d 285 (N.C. Ct. App. 2010) (Nos. 08-CRS-017588, 07-CRS-216759).
[FN123]. Transcript at 76, 78, *Brennan*, 692 S.E.2d 427 (No. 08-CRS-954). CMPD follows the same security procedure. Trial Transcript Vol. II at 121, *Hough*, 690 S.E.2d 285 (Nos. 08-CRS-017588, 07-CRS-216759).
[FN124]. Transcript Vol. I at 64-67, *State v. Brewington*, 693 S.E.2d 182 (N.C. Ct. App. 2010) (No. 08-CRS-50436).
[FN125]. Transcript Vol. II at 123-24, *Hough*, 690 S.E.2d 285 (Nos. 08-CRS-017588, 07-CRS-216759).
[FN126]. Transcript Vol. II at 99, *Brewington*, 693 S.E.2d 182 (No. 08-CRS-50436).
[FN127]. Id. at 93. According to Special Agent Schell, approximately 200 people at the SBI had access to the database file. Id. at 98.
[FN128]. Id. at 91-92. Ms. Alloway testified in *Hough* that approximately 99% of the lab tests performed at the CMPD chemistry section received a “peer review.” Transcript Vol. II at 124, *Hough*, 690 S.E.2d 285 (Nos. 08-CRS-017588, 07-CRS-216759).
[FN129]. Transcript Vol. II at 92, *Brewington*, 693 S.E.2d 182 (No. 08-CRS-50436); see also Transcript Vol. II at 124, *Hough*, 690 S.E.2d 285 (Nos. 08-CRS-017588, 07-CRS-216759) (“A peer review consists of looking for grammatical errors or mainly errors in your analysis meaning [the reviewer] wouldn’t come to the same conclusion that [the testing analyst] came to.”).
[FN130]. Transcript Vol. II at 92, *Brewington*, 693 S.E.2d 182 (No. 08-CRS-50436).
[FN131]. Id.
[FN132]. Id. at 92, 111.
[FN133]. 2 Paul C. Giannelli & Edward J. Imwinkelried, *Scientific Evidence* § 23.02, at 477 (4th ed. 2007).
[FN134]. As an example, when a laboratory rat is injected with morphine, its tail will form an S-shaped curve. Id.
[FN135]. Marijuana is often first tested with this technique. See Transcript Vol. II at 122, *State v. Hough*, 690 S.E.2d 285 (2010) (Nos. 08-CRS-017588, 07-CRS-216759); Giannelli & Imwinkelried, *supra* note 133, § 23.02[a], at 479. The test requires an analyst to look at a substance to determine whether the plant exhibits visual qualities consistent with a banned substance. Id.
[FN136]. As explained in the testimony above from Special Agent Schell, these tests require an analyst to apply a known reagent to a substance, observe the color change, and classify the substance based on the color. Giannelli & Imwinkelried, *supra* note 133, § 23.02[b], at 480. Color change tests come in a variety of forms and allow an analyst to perform tests to detect codeine, cocaine, barbiturates, heroin, and morphine among others. Id. The Marquis’ reagent, used in *Brewington*, is a commonly used color test. Id.
[FN137]. Microcrystal tests, also utilized in *Brewington*, are similar to color tests, except that in addition to producing a color the reagent also causes a pattern to form in the substance. Id. § 23.02[c], at 482. The pattern produced by the substance can then be compared by the testing analyst to a known pattern of a controlled substance. Id. at 482-83. Some devices perform a microcrystal and color test simultaneously. Id. at 70 (Supp. 2009).
[FN138]. There are several different types of chromatographic techniques. See generally id. § 23.02[d]. Thin-layer chromatography involves placing an unknown compound on a glass plate, placing the plate in solution, and measuring the distance the unknown substance travels after period of time. Id. at 485-88. The distance traveled can be compared to known controlled substances and their travel distances to determine whether an unknown substance is a controlled substance. See id. Gas chromatography uses the same approach, except that the substance is placed in a machine which changes the unknown substance into a gas. Id. at 490. As the gas goes through the machine, the machine records the retention time of different compounds. Id. at 491-92. Depending on the location of the peaks and valleys of the printout, an analyst may be able to identify the compound. Id. at 493. The identification under this test, however, is still nonspecific given that several chemicals may create a peak when they are not, in fact, a controlled substance. Id. at 494. Performance liquid chromatography creates the same sort of printout using liquid instead of gas, though the test appears to be less reliable than gas chromatography. Id. at 496, 498.
[FN139]. This technique uses antibodies to detect the presence of drugs in urine. See id. § 23.02[e].
[FN140]. These tests measure reactions to unknown substances on the electromagnetic spectrum. Id. § 23.02[f], at 507.
[FN141]. This procedure measures wavelengths emitted by a compound to determine whether it is LSD. Id. § 23.02[g], at 513.
[FN142]. Id. § 23.02, at 479.
[FN143]. See id. § 23.03, at 514.
[FN144]. Like ultraviolet spectrophotometry, this test measures wavelength and energy after the substance is exposed to electromagnetic radiation. Id. § 23.03[a], at 515. Unlike the UV test, it is extremely accurate. Id. at 517. After the machine creates a graph of the substance under examination, it will search a databank to produce several best matches to known controlled substances. Id.
[FN145]. This test is rarely used; therefore, a discussion of its scientific underpinnings is omitted.

[FN146]. This test combines gas chromatography with a mass spectrometer. Giannelli & Imwinkelried, *supra* note 133, § 23.03[c], at 525. The gas created in the first phase is then used in the mass spectrometer, which fragments the compound with an electron beam and records the fragmentation pattern. *Id.* at 529.

[FN147]. This technique measures the melting point of the substance to determine its composition. *Id.* § 23.03[d], at 535-36.

[FN148]. *Id.* § 23.02, at 477.

[FN149]. 5 David L. Faigman et al., *Modern Scientific Evidence, The Law and Science of Expert Testimony* § 42:32, at 635 (2009-10 ed.).

[FN150]. Brief for the Respondent at 7, *Melendez-Diaz v. Massachusetts*, 129 S. Ct. 2527 (2009) (No. 07-591).

[FN151]. Faigman et al., *supra* note 149, § 42:35, at 645.

[FN152]. *Id.* at 645-46.

[FN153]. *Id.* at 646.

[FN154]. *Id.* at 645.

[FN155]. See Transcript of Record Vol. I, *Brewington*, *supra* note 124, at 67.

[FN156]. *Id.* at 70.

[FN157]. *Id.* at 72.

[FN158]. Transcript of Record, *Brennan*, *supra* note 121, at 70.

[FN159]. *Id.* at 71, 81-82.

[FN160]. See *infra* Part III.

[FN161]. See Giannelli & Imwinkelried, *supra* note 133.

[FN162]. Faigman et al., *supra* note 149, § 41:33, at 496.

[FN163]. Giannelli & Imwinkelried, *supra* note 133, at 494.

[FN164]. *Id.* § 20.04[c], at 246.

[FN165]. *Id.*

[FN166]. *Melendez-Diaz v. Massachusetts*, 129 S. Ct. 2527, 2532 (2009).

[FN167]. Transcript of Oral Argument at 5-6, *Melendez-Diaz*, *supra* note 119.

[FN168]. *Melendez-Diaz*, 129 S. Ct. at 2532.

[FN169]. *Id.* at 2538.

[FN170]. See The Scientific Working Group for the Analysis of Seized Drugs, *Recommendations*, at 15-16 (5th ed. 2010), available at <http://www.swgdrug.org/Documents/SWGDRUG%20Recommendations%20-%205th%20edition.pdf>.

[FN171]. *Id.* at 15.

[FN172]. *Id.* at 34. In the forensic analysis context, “uncertainty” does not encompass the notion of doubt. *Id.* Instead, “uncertainty” refers to the limitations inherent in testing and the conclusions reached; and the science of forensic analysis seeks to eliminate this “uncertainty” through rigorous training, extensive procedures, and documentation. *Id.* Nevertheless, as discussed, the testing process is fraught with opportunities for human error.

[FN173]. *Id.* at 34-35.

[FN174]. *Id.* at 23.

[FN175]. *Crawford v. Washington*, 541 U.S. 36, 51 (2004).

[FN176]. *United States v. Washington*, 498 F.3d 225, 231 (4th Cir. 2007), cert. denied, 129 S. Ct. 2856 (2009); see also *United States v. Moon*, 512 F.3d 359 (7th Cir. 2008) (following Washington); *United States v. Lamons*, 532 F.3d 1251 (11th Cir. 2008) (following Washington); *United States v. Anderson*, No. 2009-06, 2009 CCA LEXIS 438 (A.F.C.C.A. 2009) (following Washington), cert. granted, No. 10-6004/AF, 2010 CAAF LEXIS 757 (C.A.A.F. June 1, 2010).

*** SECTIONS OMITTED ***

[FN231]. See Brief of the States of Indiana et. al. as Amici Curiae Supporting Respondent at 2-5, 24, *Briscoe v. Virginia*, 130 S. Ct. 1316 (2010) (No. 07-11191). Between July 2008 and July 2009, the State of Massachusetts claimed that the average amount of time needed to receive the results of a forensic drug test from the laboratory doubled from 83 days to 169 days due to trial scheduling. *Id.* at 7-8.

[FN232]. According to their brief, amici claimed to have collectively spent \$4.5 billion prosecuting drug-related cases in 2005 alone. *Id.* at 6.

[FN233]. See, e.g., discussion, *supra* note 12; see also Ohio Rev. Code Ann. § 2925.51 (2009); Tex. Code Crim. Proc. Ann art. 38.41 (2009).

[FN234]. Transcript of Oral Argument at 16, *Briscoe*, 130 S. Ct. 1316 (No. 07-11191).

[FN235]. See *Bullcoming v. New Mexico*, 226 P.3d 1, 6 (N.M. 2010), cert. granted, No. 09-10876, 2010 U.S. LEXIS 5754 (U.S. Sept. 28, 2010); *Brennan*, 692 S.E.2d at 429-30; see also *Brewington*, 693 S.E.2d at 186.

[FN236]. *Crawford v. Washington*, 541 U.S. 36 (2004).

[FN237]. See *Brennan*, 692 S.E.2d at 431; see also *Brewington*, 693 S.E.2d at 190.